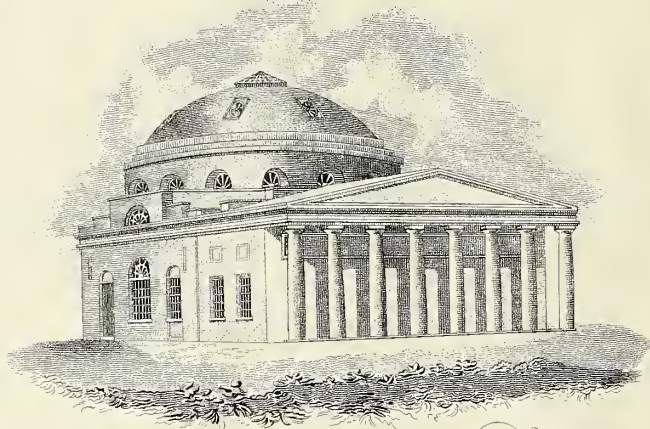
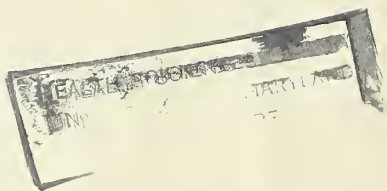


29 1944


LIBRARY
OF THE
School of Medicine



University of Maryland







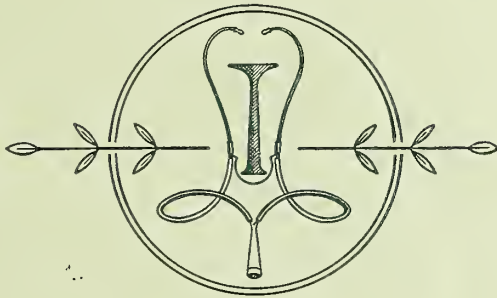
Digitized by the Internet Archive
in 2016

<https://archive.org/details/journalofkansasm4111kans>

THE JOURNAL

of

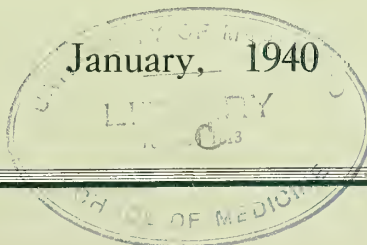
The Kansas Medical Society



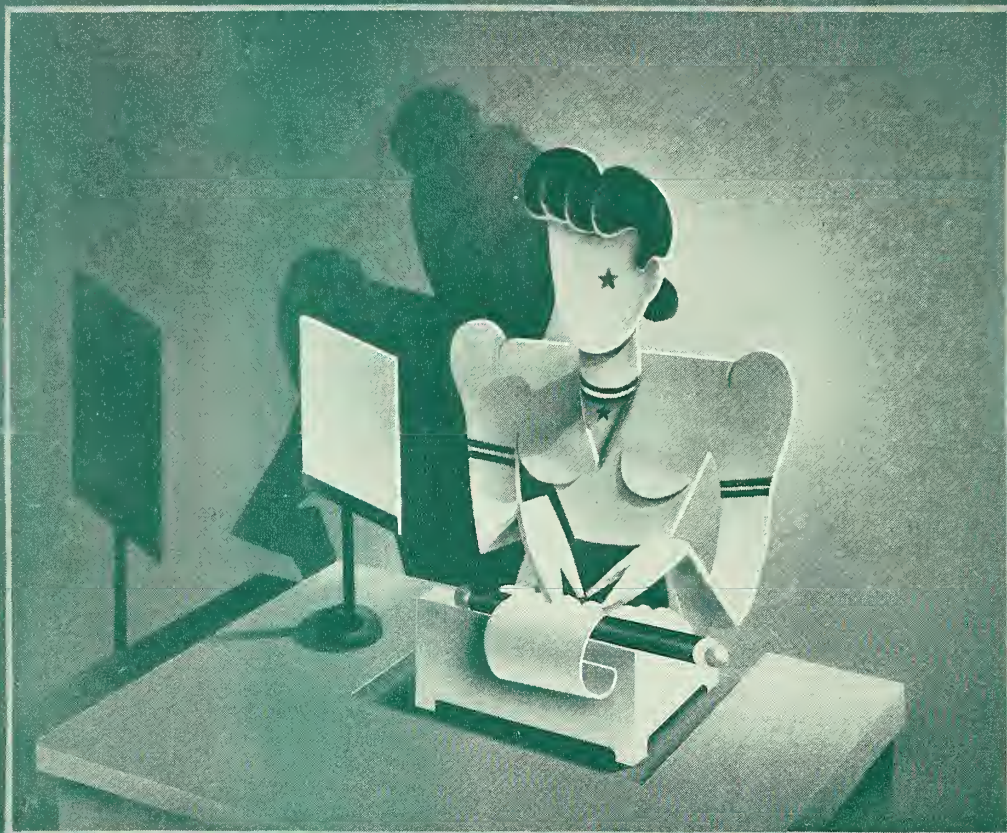
PROGNOSIS AND TREATMENT OF STREPTOCOCCUS MENINGITIS—Frank L. Menehan, M.D., Wichita, Kansas	Page 1
LEAD ENCEPHALOPATHY—Donald N. Medearis, M.D., Kansas City, Kansas	Page 5
THE MODERN CONCEPT OF DIABETES—A. J. Revell, M.D., Pittsburg, Kansas	Page 8
COMBINED SPINAL-INHALATIONAL ANAESTHESIA FOR MAJOR ABDOMINAL OPERATIONS—Paul H. Lor- han, M.D., and Thomas G. Orr, M.D., Kansas City, Kansas	Page 13
PARALYTIC ADYNAMIC ILEUS—C. E. Partridge, M.D., Emporia, Kansas	Page 15
ACQUIRED ATRESIA OF THE VAGINA, CAESARIAN SECTION, AND RETAINED LOCHIA; FOLLOWED BY SEVERE LATE ECLAMPSIA—George Cowles, M.D., and Corbin Robinson, M.D., Wichita, Kansas	Page 17
COMPLETE TABLE OF CONTENTS	Page IV

81ST ANNUAL SESSION — WICHITA, MAY 13-14-15-16

VOLUME XLI

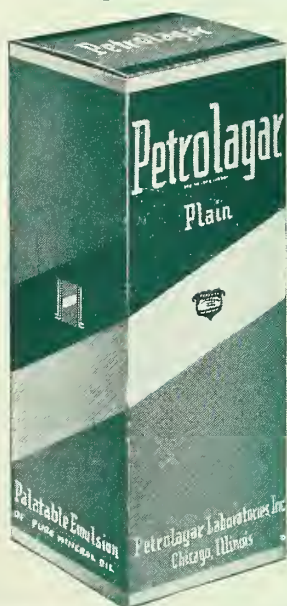


NUMBER 1



For Sedentary Workers--

★★ Petrolagar



Helps to establish and maintain a regular Habit Time of Bowel Movement. One tablespoonful of Petrolagar Plain, taken morning and night, promotes the formation of a soft, comfortably passed stool.

Petrolagar is especially useful in the treatment of chronic constipation. It may be taken over an extended period of time without increasing the dosage.

Any of the Five Types of Petrolagar will be sent to physicians on request.



Petrolagar . . . Liquid petrolatum 65 cc. emulsified with 0.1 Gm. agar in a menstruum to make 100 cc.

The Journal Of THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

JANUARY, 1940

Number 1

PROGNOSIS AND TREATMENT OF STREPTOCOCCUS MENINGITIS*

Frank L. Menehan, M.D.

Wichita, Kansas

Sulfanilamide has produced revolutionary changes in the treatment and prognosis of meningitis due to the beta hemolytic streptococcus. Before the introduction of this therapeutic agent, survival was so unusual that the mortality was estimated to be more than ninety-seven per cent. In the accompanying table, Litvak summarizes the recoveries which have been reported from 1901 to 1937.

Recoveries from Streptococcus Meningitis:

Year	Author	Cases
1901-32	Appelbaum	46
1932-35	Gray	20
1935-36	Gordon-Litvak-Corona	11
1936-37	Trachsler et al.....	35
1937	Litvak	11
Total		123

It will be noted that from 1935 to 1937, there were fifty-seven recoveries—almost as many as had been reported from 1901 to 1935. Only fifteen of these patients were treated with sulfanilamide and the question arises as to whether the streptococcus prevalent during the past few years has been one of decreased virulence. Most observers believe that this is unlikely and that the increase in recoveries in recent years has been influenced by such factors as improvement in early diagnosis, prompt and complete eradication of the primary focus, a higher incidence of the disease with a resulting increase in recover expectancy and finally, more frequent reporting of cases in which recovery has taken place.

As is usually the case when there is no effective or specific remedy for a disease, a multiplicity of procedures have been used in the treatment of streptococcus meningitis, representing in many cases "the most energetic measures that physicians could devise and patients endure."

THERAPEUTIC PROCEDURES IN STREPTOCOCCUS MENINGITIS

1. Removal of the primary focus
 - a. Simple or radical mastoidectomy
 - b. Jugular ligation, labyrinthotomy, sinus drainage, etc.
2. Drainage of the cerebro-spinal fluid
 - a. Lumbar, cisterna and ventricular punctures
 - b. Laminectomy, trephine of the cisterna, etc.
 - c. Forced perivascular drainage
3. Specific and non-specific antisera and antitoxins
 - a. Scarlet fever antitoxin and convalescent scarlet fever serum
 - b. Antimeningococcus sera
 - c. Polyvalent streptococcus sera
 - d. Stock and autogenous vaccines
 - e. Autogenous blood serum
 - d. Erysipelas antitoxin
4. Transfusions, intravenous glucose, etc.
5. Injection of chemotherapeutic agents (intravenously, intraspinally, and/into the carotid arteries):

Mercurochrome, metaphen, gentian violet, acriflavine, colloidal silver and gold, Pregl's iodine solution, etc.

Regardless of the method of treatment employed, emphasis has always been placed upon the desirability of eradicating the primary focus of infection at the earliest possible moment. In the majority of the cases, the disease results from the extension of a purulent otitis media, and mastoidectomy is indicated to prevent continuous re-infection of the meninges. Occasionally, more radical surgical procedures must be employed to accomplish this objective.

Drainage of the spinal fluid was formerly considered a procedure of much importance and this was accomplished not only by repeated lumbar and cisternal taps but also by laminectomy and surgical drainage of the cisterna. Retan has advocated "forced perivascular drainage" of the cerebrospinal fluid. To accomplish this, he injects hypotonic (0.375) saline solution intravenously to lower the osmotic pressure of the blood. Theoretically, this causes a continuous flow of fluid from the capillaries into the perivascular tissue spaces of the central nervous system. The lake of spinal fluid is thereby increased and the resulting increase in absorption of

*Presented at the 80th Annual Session of The Kansas Medical Society, Topeka, May 3, 1939.

the fluid through the venous capillaries, carries away increased amounts of the toxic products of the infection. Although the course of the disease was prolonged, Retan did not succeed in establishing any cures. More recently he has been giving sulfanilamide in the hypotonic solution and, in a case recently reported, there was rather dramatic improvement. Further observations will be necessary to establish the fact that the hypotonic solution with sulfanilamide is more effective than sulfanilamide alone. In evaluating the results obtained by drainage of the cerebrospinal fluid, it may be significant that in the patients who have recovered, simple lumbar drainage was usually the method employed.

A variety of biological agents have been employed in the treatment of streptococcus meningitis. Because of the many strains of this organism, specificity in such products is hopeless, with the possible exception of scarlet fever antitoxin and convalescent serum. Recoveries have been reported when these agents have been used, in cases representing complications of scarlet fever. Antimeningococcus serum has frequently been administered without evidence of favorable effect.

Continuous intravenous glucose and repeated blood transfusions have been employed. The effort has usually been made to obtain a donor who has recently recovered from a streptococcal infection. From the standpoint of supportive treatment, the desirability of these procedures is not open to question. More specific effects upon the disease have not been demonstrated.

For years before the advent of sulfanilamide, chemotherapeutic agents were used in the treatment of streptococcus meningitis. Mercurochrome, metaphen, gentian violet, acriflavine, colloidal silver and gold, Pregl's iodine solution and many others have been used. They were given intraspinally and intravenously and Kolmer developed the method of injecting them into the carotid arteries in the hope that they would reach the seat of the infection in greater concentration. Occasional recoveries have occurred, in cases in which these agents were used. In one of the recoveries which are reported in this article, solganol (aurothioglucose) was used intraspinally. The failure to obtain any consistently favorable results raises the question as to whether recovery may at times occur with treatment or in spite of treatment.

Commenting upon the use of these chemical substances, Kolmer in 1931 stated that his experience with them had convinced him of their ineffectiveness and had caused him to "abandon all hope of conquering septic meningitis by chemotherapeutic agents until such time as more powerful antistreptococcal agents in vivo are discovered." Five years later,

in 1936, with the introduction of sulfanilamide, such a chemotherapeutic agent became available and it soon became evident that this drug would revolutionize the treatment of streptococcus meningitis.

The results obtained by some of the outstanding clinics in the treatment of this disease, before and after the introduction of sulfanilamide, are shown in Table II.

Reported by	Period	TREATMENT		MORTALITY	
		Drainage, Etc. Died	Sulfanilamide Rec.	Died	Per Cent
Eley-Children's Hospital, Boston	1926-36	92	1	....	98
	1937-39	....	....	0	6 0
Silverthorne & Brown-Toronto	1924-36	92	1	....	98
	1937-39	....	....	8	8 50
Schwentker Johns Hopkins	1921-36	37	0	....	100
	1937-39	....	....	4	19 18
Appelbaum N. Y. B. of H.	1908-36	249	25	....	91
	1937-39	....	....	7	28 20
St. Fran. & Wesley, Wichita	1928-36	16	1	....	94
	1937-38	....	....	2	3 40

Following are brief case histories of the four children in Wichita who have recovered from streptococcus meningitis. Case I—F. A., a white male, five years of age, was admitted to Wesley Hospital, March 6, 1936. The past history was negative except that during the preceding winter, he had contracted frequent infections of the upper respiratory tract. On January 21, 1936, a bilateral myringotomy was performed and the ears drained for about two weeks. He then returned to school but a few days later again developed acute tonsillitis and the drainage from the ears recurred. These symptoms subsided in a few days but about March 1st, he developed a high temperature with evidence of tonsillitis and catarrhal otitis media. The day before admission, he became extremely irritable and physical findings were elicited which were suggestive of meningitis.

Spinal puncture revealed a cloudy fluid containing 2000 cells and streptococci were found in the smear. A presumptive diagnosis of streptococcus meningitis was made and the parents were given an unfavorable prognosis. At this time, Dr. Henry Tihen supplied us with Solganol, a gold compound which he had obtained at the Neumann Clinic in Vienna where it was said to have been used with success in the treatment of this disease. Four 0.1 gm. ampules were administered intrathecally every other day. There was a heavy growth of hemolytic streptococci in cultures of the fluid obtained on the first and third days but subsequent cultures were sterile and there was a progressive decrease in the number of cells. Be-

ginning on the fourth day in the hospital, there was a marked improvement in the general symptoms and the patient went on to complete recovery, although he continued to run a low grade temperature for a month from the onset of his illness.

During the next few months, Solganol was unsuccessfully used in the treatment of three more cases of streptococcus meningitis.

Case II—(Courtesy of Drs. Emery and Marshall)

C. D., white male six years of age was admitted to St. Francis Hospital, May 5, 1938. He was well until the previous week when he developed a head cold. Two days before admission, both ears began to drain. The following day he complained of headache and vomited several times. Stiff neck was noted the next day and he was referred to the hospital.

Spinal puncture revealed a cloudy fluid containing 3600 cells. Hemolytic streptococci grew on culture. Treatment was instituted with neo-prontosil solution alternating with sulfanilamide and although the organisms were found on smear for a few days, they were not present in the fluid taken one week after admission. The child continued to run a temperature of 100 to 102 degrees for the next three weeks but was then discharged and went on to complete recovery.

X-ray showed cloudiness of the right mastoid but it was not felt that there was enough evidence of involvement to warrant mastoidectomy.

Case III—(Courtesy of Drs. Evans and Gsell)

C. M., white male of nine years, was in good health until two weeks before his admission to St. Francis Hospital, on March 27, 1937. His illness began with an acute infection of the upper respiratory tract and a purulent otitis media. Two days before he entered the hospital, he began to complain of headache and developed a high temperature, with extreme restlessness. Nuchal rigidity was found on physical examination and he was referred to the hospital.

Spinal puncture revealed a cloudy fluid with 1120 cells and hemolytic streptococci grew on culture. Another spinal puncture was not made until April 14, 1937, at which time the fluid contained forty cells and no organisms grew on culture. No more punctures were made.

The treatment consisted of neo-prontosil, 2.5 per cent solution intramuscularly, alternating with sulfanilamide by mouth. By the end of the first week, the temperature range was about three degrees lower (99 to 101 degrees) and all symptoms of meningeal irritation had disappeared.

X-ray examinations on March 28 and April 14 showed cloudiness of both mastoids but redness and tenderness were not present.

The patient was discharged at the end of a month

still running a low grade temperature. He went on to recovery with no evidence of sequelae.

Case IV—J. A., white male, six years of age. Developed a sore throat and purulent otitis media about one month before admission. The right ear continued to discharge and two days before admission, he developed a high temperature and headache. The next day he began to vomit, and complain of pain in the legs. On November 10, 1938, nuchal rigidity was noted and he was admitted to St. Francis Hospital.

The spinal fluid was cloudy and contained 1230 cells but no organisms were found on smear. Ten c.c. of neo-prontosil, 2.5 per cent solution, were given intrathecally and five hours after admission, a right mastoidectomy was performed by Dr. E. E. Tippin. Considerable pus and bone necrosis were encountered. Five c.c. of neo-prontosil solution were given intramuscularly every four hours and on the following day ten c.c. were again given intrathecally. For forty-eight hours after operation the patient was comatose, had a temperature of 104 to 106.5 degrees and frequent generalized convulsions. On the third hospital day, a critical drop in temperature occurred and there was immediate improvement in the patient's general condition. The temperature did not again rise above 100 degrees. Hemolytic streptococci grew from cultures of the fluid taken on November 10th and 11th but not thereafter. There was a progressive decrease in the cells the count being thirty-eight on November 16th, the seventh hospital day. From November 12th to 15th, five c.c. of neo-prontosil were given intramuscularly and five grains of prontosil every four hours by mouth. The neo-prontosil was discontinued on November 16th and the prontosil was stopped the next day because of vomiting.

Recovery was complete and the patient has since had a mild case of whooping cough.

By these cases and by the favorable results which are being reported with increasing frequency, it has been amply demonstrated that sulfanilamide is highly effective in the treatment of streptococcus meningitis. The problem now is to determine how this drug may be used to the best advantage. In this connection, it is possible that our failures may be more enlightening than our successes.

In determining the most rational and effective methods of treatment, we must not be influenced too much by the dramatic results which are sometimes obtained with more or less haphazard administration of sulfanilamide. Our chief objective must naturally be saving of the greatest possible number of lives and in achieving it, the most intelligent and rational technique must be employed in every case. It must be emphasized that the patient's best chance of sur-

vival from a very dangerous disease depends not on sulfanilamide alone but upon the scientific use of this drug in combination with other methods of treatment.

The importance of arriving at an early diagnosis is obvious. Within twenty-four hours, there will be a marked dissemination of the infection with a rapid multiplication of organisms and elaboration of streptococcus toxin. If the accompanying signs of meningeal irritation pass unrecognized, the brain becomes covered with a purulent exudate and the effectiveness of any form of treatment is diminished. Early recognition of meningeal symptoms depends first of all upon an appreciation of the potential danger from acute infections of the middle ear; secondly, upon the proper evaluation of certain subjective symptoms occurring in the course of a purulent otitis, viz., headache, vomiting, and marked restlessness and irritability; thirdly, upon a careful physical examination of patients exhibiting these symptoms. In children, the restlessness and irritability occasionally approach hysteria and unfortunately, such symptoms have been attributed to temperament. An appreciation of the necessity for frequent examinations of sick children, will help to prevent delays in diagnosis.

When the possibility of an intracranial complication arises in the course of a purulent otitis media or severe sinus or upper respiratory infection, a spinal puncture should be done at once. If cloudy fluid is obtained, a presumptive diagnosis of streptococcus meningitis may be made. A positive diagnosis should be made only when the organisms grow in a culture of the spinal fluid, but sulfanilamide should be started immediately without awaiting the result of the culture.

The question at once arises as to the route of administration. Neo-prontosil, 2.5 per cent solution or sulfanilamide 0.8 per cent solution may be given intrathecally and some observers advocate this method of treatment. Most clinicians feel that intrathecal administration is unnecessary because, when the drug is given orally, the concentration in the spinal fluid is eventually almost as great as that in the blood. Therefore, with the possible exception of an initial intrathecal dose, oral administration is the route of choice. If vomiting or diarrhea interfere with retention or absorption, sulfanilamide may be given subcutaneously in 0.8 per cent solution or neo-prontosil solution may be employed intramuscularly.

In order to evaluate the effectiveness of the drug, it is desirable to follow its concentration in the blood or spinal fluid. In severe streptococcal infections of this kind, sulfanilamide should be given in quantity sufficient to maintain a blood level of about ten mgm.

per 100 c.c. of blood. This is usually accomplished by giving a child about one grain per pound of body weight during the twenty-four hour period. It has also been established that the therapeutic level is best maintained when the drug is administered at four hour intervals. The maintenance dose should be continued until the spinal fluid is sterile and there is definite evidence of clinical improvement. It may then be gradually reduced but should be continued until the danger of relapse is unlikely.

Clinical observations have not thus far established the superiority of neo-prontosil over sulfanilamide. Its effectiveness evidently does not depend entirely upon its sulfanilamide content which is only about eleven per cent. In the absence of demonstrated superiority, the claim that it is less apt to cause reactions is probably not of great significance in streptococcus meningitis. In such a serious disease, sulfanilamide may be used adequately and fearlessly, and, if complications such as hemolytic anemia or agranulocytosis occur, they must be counteracted as well as possible with blood transfusions.

In spite of the fact that the patient's recovery depends most of all upon sulfanilamide, we must not lose sight of the fact that there are at times complete failures with the drug, and, bearing this in mind, the necessity is realized of removing at the earliest possible moment, the primary focus from which the meningitis has originated. This clinical problem usually resolves itself into the question of the advisability of performing a simple mastoidectomy. In the presence of meningitis, the indications for mastoidectomy are much broader than usual. Tenderness over the mastoid with or without x-ray evidence of bone destruction, should be considered sufficient reason for surgical intervention. The argument that the patient may get well without operation is not valid. In every case, his chance of recovery will be increased by early removal of the focus from which the invasion has originated. More radical surgical procedures are indicated as the need for them arises.

In the effort to reduce the mortality from this disease to the lowest possible level, the value of supportive treatment with transfusions, intravenous glucose, etc., must not be overlooked. Especially in cases which are not responding well to other forms of treatment, these adjuncts may conceivably be of value in increasing the antibody response and thereby enhancing the benefits produced by the bacteriostatic action of sulfanilamide.

In our present concepts of treatment, drainage of the spinal fluid is relatively unimportant as a therapeutic procedure. Spinal punctures are done chiefly for diagnosis and for the purpose of following the course of the disease.

CONCLUSIONS

Four cases of recovery from streptococcus meningitis are reported in conjunction with a discussion of the revolutionary changes which have been produced in treatment and prognosis by the advent of sulfanilamide.

In a disease in which recovery rarely occurred, the mortality has been reduced to approximately twenty per cent.

Reliance must not be placed upon sulfanilamide to the exclusion of other important aspects of the treatment: early diagnosis, prompt eradication of the primary focus, supportive treatment, etc.

Success in the management of streptococcus meningitis represents a major achievement in therapeutics.

BIBLIOGRAPHY

- Neal—J.A.M.A. 111: 1353 (Oct. 8, 1938).
 Eleg.—J.A.M.A. 111: 1356 (Oct. 8, 1938).
 Silverthorne & Brown—*Jour. of Pediatrics*, Apr. 1938.
 Schwentker—*Med. Clinics N.A.*, 1449 (Sept. 1938).
 Appelbaum—*Laryngoscope*, July 1938.
 Retan—*Am. J. Dis. Child.* 56: 483 Sept. 1938.
 Martin & Ellenberg—*Arch. Ped.* Dec. 1937.
 Lervak & Klughertz—*Arch. Ped.* Dec. 1937.
 Weinberg—J.A.M.A. June 5, 1937.
 Woodman—*Arch. Otolaryngology*, Sept. 1937.
 Godwin—*Laryngoscope*, Jan. 1938.
 Anderson—J.A.M.A. May 8, 1938.
 Minn. General Hospital Bulletin—1938.

LEAD ENCEPHALOPATHY*

Donald N. Medearis, M.D.

Kansas City, Kansas

Lead poisoning is a serious disorder found not infrequently in infants and young children. McKhann¹ reports more than a hundred cases treated at the Boston Children's Hospital over a ten year period. The central nervous system is particularly vulnerable in childhood, and the more severe intoxications are characterized by an encephalitic process which often leads to a fatal termination or a permanent cerebral injury.

Toxic amounts of lead may be acquired in a variety of ways. Infrequently, it may be absorbed through the skin; or, it may be inhaled, a method of increasing importance; but, usually, it is ingested. The breast fed infant may ingest appreciable amounts of lead by nursing through a lead nipple shield, or by sucking a breast to which lead acetate ointment has been applied, or by taking mother's milk containing lead, as reported by Kasahara² from Japan, where lead in the face powder and other cosmetics used by the mother is absorbed and secreted in her milk. Drinking water from lead plumbing, fruit sprayed with a lead compound, and lead painted toys

and cribs have all been reported sources of ingested lead. Recently, there have been increasingly numerous reports of cases of lead poisoning acquired by the inhalation of lead impregnated air in homes where old storage battery casings were used as fuel.

Acute intoxication due to the sudden ingestion of a large quantity of lead is seldom seen in childhood. Instead, small amounts of lead are ingested or inhaled over a long period of time. The lead is absorbed and carried in the blood stream to the tissues as lead phosphate. The tissues especially involved in the deposition of the lead are the central nervous system, the liver, the pancreas, and the bones. In latent lead poisoning, the skeleton serves as the chief storehouse. From this reservoir the lead may be mobilized by some intercurrent febrile illness with an attendant acidosis. Acute symptoms have been known to recur in this manner as long as eight years after the victim's last known contact with lead compounds.

Early symptoms due to lead intoxication in infants and children may be only a general irritability and fretfulness, pallor due to the profound secondary anemia, and the symptoms of disturbed gastrointestinal function, such as lack of appetite, constipation, vomiting, and abdominal cramps. The evidences of a peripheral neuritis, so commonly seen in adults, are rarely found in children below the ages of four to seven years. The onset of an encephalitis, so frequently found in infants and children with severe intoxications, may be shown by a change in the mental state accompanied by persistent vomiting, visual disturbances occasioned by paralyses of the extra-ocular muscles, and alterations in the rates of pulse and respiration, progressing to delirium, stupor, coma; convulsions, and perhaps, death. Of the 130 cases at Boston Children's Hospital cited by McKhann¹, fifty-five per cent showed evidences of encephalopathy, and of these, twenty-five per cent died, thirty-five per cent were left with permanent neurological damage, and fifteen per cent, although free of acute symptoms, showed latent lead poisoning after apparent recovery. Death is usually due to central respiratory failure.

Certain physical findings which accompany these symptoms of encephalopathy, are, of course, diagnostically helpful. Fever is usually absent in the mild cases without complications; but due, perhaps to a disturbed heat-regulatory center, a very high fever may occur in the terminal stages of fatal cases. The intense cerebral edema and marked increase in intracranial pressure produces choking of the optic discs, and, frequently, even separation of the cranial sutures. Occasionally, a slight kidney irritation may give rise to transient albuminuria. Glycosuria and hyperglycemia are frequent findings in the more severe cases, but it is uncertain whether the causative factor is

*Presented at the 80th Annual Session of The Kansas Medical Society, Topeka, May 4, 1939.

pancreatic injury or cerebral damage. A lead line is rarely found on the gums of infants and young children for the lead sulphide deposited here is dependent upon sulphides released from decaying organic matter in the mouth. The blood picture is characterized by a severe secondary anemia in which basophilic stippling of the erythrocytes is a prominent feature. Lead found by chemical analysis of the excreta is not conclusive evidence of poisoning, for normal children excrete small amounts of the metal in the urine and stools. Lumbar puncture usually reveals a clear spinal fluid under increased pressure. The cell count is elevated, thirty-five to forty cells, chiefly lymphocytes, being found as an average. Tests for increased globulin in the spinal fluid are positive. Levinson⁴ reports the successful diagnostic use of the scarification test as modified by Kasahara. A drop of twenty-five per cent solution of sodium sulphide is applied to a small scarified area of the skin of the forearm. A black discoloration of the abraded area, the result of the precipitation of lead sulphide, signifies the presence of toxic amounts of lead in the patient's serum.

Perhaps the most valuable confirmatory evidence in the diagnosis of plumbism in children is found in the roentgenograms of the long bones. Since 1929 and 1930, many investigators, both in this country and in Japan, have emphasized the constancy with which characteristic bands of increased density are found by x-ray study at the growing ends of long bones of children suffering from lead poisoning. Caffey⁵ has recently stated that this reliance on the roentgen diagnosis of plumbism is well grounded, and cites Kasahara, Vogt and McKhann in support of this opinion. Certain conditions, however, must be recognized as interfering with the accuracy of this method of diagnosis. Caffey reports a case of chronic lead poisoning in a three and one-half-year-old child with active rickets in whom the characteristic lead lines appeared in the bones only coincidentally with healing of the rickets. He explains the absence of lead lines in the skeleton during active rickets by the close parallelism in the deposition of calcium phosphate and that of lead phosphate in growing cartilage. Since the skeletal changes in lead poisoning and active rickets are physiologically and anatomically antagonistic, the lead lesions fail to develop during active rickets. On the other hand, the presence of characteristic lines of increased density at the ends of long bones may not always signify plumbism for they may be caused by other heavy metals. Beautiful examples may occur after the administration of bismuth. It is also recognized^{1,6} that lines of a confusing similarity to the lead lines of bones may be found in healing rickets, vitamin A deficiency, and after phosphorus ingestion.

In brief, the general symptoms of lead poisoning must be distinguished from those of intra abdominal conditions requiring surgery of paralytic states associated with acute poliomyelitis or diphtheria sequelae, or even of rheumatic fever. When, in the severe intoxications, evidences of encephalopathy have developed, brain tumor, tuberculous meningitis, and other encephalitides must all be considered in the differential diagnosis. But with the help of the characteristic blood picture, the roentgenographic findings in long bones, and a careful investigation into the history for possible sources of lead, the diagnosis can usually be made from positive findings characteristic of the disease rather than by recourse to the process of exclusion of all other possibilities.

The treatment of the severe lead intoxications characterized by encephalopathy is, at best, unsatisfactory. The immediate problem is the relief of convulsions which may respond only to a general anesthetic. The repeated intramuscular injections of a twenty-five per cent solution of crystalline magnesium sulphate in doses of 0.8 c.c. per kilogram of body weight as often as every three or four hours may be helpful. Intravenous injection of hypertonic glucose solution has been recommended for the relief of the cerebral edema.

Ever since Aub⁷ and his coworkers pointed out in 1925 that lead is absorbed, transported, deposited and excreted much as is calcium in the human body, clinicians have directed therapy in acute plumbism toward the replacement of the lead into the bones where it is symptomatically inert. Such a method of treatment must be based in its detail upon an accurate study of the physical chemistry of calcium and lead in the animal body. As recently pointed out by Kowaloff⁸, it was Aub's thought that inasmuch as lead and calcium may be held in the body at a common site and the chemical behavior of some of their salts is similar, the same physiological conditions should favor the liberation and deposition of both elements. In experimental animals, a low calcium diet will deplete the bones of calcium, and a high calcium diet will cause a storage of lime salts in the bones; therefore, an increased calcium intake should deposit the lead in the bones, and a decreased calcium intake should liberate the lead from that storehouse. But Kowaloff has also referred to the later experimental work of Shelling⁹ on the effect of dietary calcium and phosphorus on the toxicity of lead in rats. Based on the validity of the principle of a solubility product constant for the lead phosphate dissolved in blood serum, it may be argued that an abundance of phosphate and foods containing phosphorus in the diet will raise the phosphate content of the serum, and in turn precipitate more lead phosphate from the serum depositing it in the skeleton, thus reducing

the amount of soluble lead in the serum. An increased calcium intake inadequately balanced by phosphate would have just the reverse effect. Shelling attributes Aub's clinical successes to the fact that he used large quantities of milk which contains an abundance of phosphorus as well as calcium. Using this hypothesis as a rationale for therapy, Kowaloff has reported success in the treatment of acute plumbism in children with a basic diet of one quart of milk and two eggs daily to which is added ten per cent aqueous solution of disodium phosphate administered in doses of ten c.c. three times daily.

In any event, once the patient with acute plumbism has been removed from the source of lead, and acute symptoms have been controlled by symptomatic medication and treatment directed at reducing the amount of soluble lead by storing it in an inert form in the skeleton, all writers have exercised caution in advising later "deleading" by either production of acidosis, reduction of calcium intake, or administration of parathyroid hormone. Such procedure is dangerous in that acute symptoms may be reinduced. If kept free from further lead absorption, the patient probably will be slowly depleted of his lead through natural processes of elimination.

CASE REPORT

J. J. K., a ten months old white girl, was first seen by the writer, Nov. 26, 1938, at his office where she was brought because of recurring vomiting of six weeks duration, listlessness, and poor weight gain. She was the youngest of three children, born at term, Feb. 1, 1938. Delivery was normal. The birth weight was six pounds. The infant was breast fed, occasionally supplemented with cow's milk. Orange juice and cod liver oil had been given very irregularly. Her progress had been satisfactory until the onset of a diarrhea in September, 1938. This lasted about one week, after which she seemed reasonably well for about one month. In October, however, she began to vomit after nursings and her weight became stationary. Several physicians were consulted in turn, and diagnosis of acute tonsillitis and acute otitis media were made. Bilateral myringotomy was done November 23, 1938. Physical examination at the writer's office revealed the following essential features; Rectal temperature, 100 degrees F.; weight fifteen pounds four ounces; and obvious malnutrition, marked pallor, and sero-purulent discharge from the ears, together with the absence of all other abnormal findings. A blood count showed hemoglobin, seventy-two per cent; erythrocytes, 4,450,000 per cu. mm.; leukocytes, 22,000 per cu. mm.; and a differential count of seventy-eight per cent polymorphonuclears, twenty-one per cent lymphocytes, and one per cent monocytes. No basophilic stippling of ery-

throcytes was reported. Routine feedings of an evaporated milk mixture and symptomatic medication were prescribed.

Some improvement in the vomiting and in the patient's general condition was noted by the parents the next day, but she was admitted to Bethany Hospital early the morning of November 28, 1938, because of the abrupt onset of convulsions. Examination at the hospital showed essentially no change in the findings of two days before, except rhythmic muscular twitchings of the left leg, and rather profound stupor. Later, the knee kicks were found to be hyperactive on the right and absent on the left. There were recurring generalized convulsions. On admission, the rectal temperature was 98.6 degrees F.; urinalysis was essentially negative except for 2.9 per cent sugar; and the blood picture showed hemoglobin, forty-eight per cent; erythrocytes, 3,770,000 per cu. mm.; leukocytes, 16,150 per cu. mm., with seventy per cent polymorphonuclears, four per cent myelocytes and metamyelocytes, and twenty-six per cent lymphocytes. The stained smear showed prominent basophilic stippling of many of the erythrocytes. Because of this report the blood smear from a patient with convulsions, x-rays of the long bones were ordered and a lumbar puncture was done. Roentgenograms showed characteristic lead lines in the long bones. The spinal fluid was clear, under pressure of thirty mm. of mercury, and showed a cell count of thirty-five per cu. mm., with ninety-two per cent lymphocytes; the globulin was strongly positive. The spinal fluid and blood Wassermann tests were negative. Blood chemistry studies showed: sugar, 180 mg. per 100 c. c.; non-protein nitrogen, 32.5 mg. per 100 c. c.; calcium, 11.77 mg. per 100 c. c.

After establishing a diagnosis of Lead Encephalopathy by these data, the writer questioned the parents further and obtained the significant history that old storage battery casings had been used for fuel in the patient's home for the past three months. Blood smears from all members of the household showed basophilic stippling of the erythrocytes and secondary anemia. The patient therefore, was inhaling lead fumes and ingesting lead contained in the breast milk she nursed from a mother with chronic lead poisoning.

The patient's course in the hospital was progressively down hill. An attempt was made to demobilize the lead with a high phosphorus diet and administration of disodium phosphate as suggested by Kowaloff. Transfusion was given to combat the severe secondary anemia. Various barbiturates were used as sedatives. Nevertheless the meningeal and encephalitic symptoms were never completely controlled. The temperature rose steadily to 106 degrees F., rectally, just before exitus. Evidences of a broncho-

pneumonia developed terminally at the right base posteriorly. The patient expired December 3, 1938.

Necropsy was done by Dr. Ward W. Summerville who lists the following significant findings in post mortem study: (1) meningeal edema, focal perivascular encephalomalacia, hematogenous pigmentation of liver and spleen, and deposition of lead in the osseous trabeculae of the zone of provisional calcification in the right femur,—all pathognomonic of severe plumbism with associated encephalopathy; (2) bilateral otitis media; (3) bilateral bronchopneumonia. He further comments that the most significant evidence of plumbism in this case is the demonstration of the deposit of lead in the long bones as lead sulphide by the Hydrogen Sulphide—Formaldehyde—Formic Acid method of VonTimm. The primary cause of death was plumbism with associated encephalopathy. The contributory cause was bilateral bronchopneumonia.

SUMMARY

1. Lead encephalopathy is not rare in children and should be considered as a possible diagnosis in every case presenting encephalitic symptoms.

2. Facilities are available for making the diagnosis on the basis of positive clinical and laboratory findings if only the condition is kept in mind by the clinician.

3. Treatment is disappointing, but theoretically, a high phosphorus diet, as outlined by Kowaloff and based upon Shelling's experiments, would seem to offer a rational method of demobilizing lead in acute plumbism.

4. A fatal case of lead encephalopathy is reported which shows most of the typical features of severe cases, and which re-emphasizes the dangers inherent to the use of storage battery casings as fuel, a practice not infrequently found in the homes of low-income families.

BIBLIOGRAPHY

1. McKhann, Chas. F.: Lead Poisoning, Brennenman's Practice of Pediatrics Vol. 1, Chap. XVIII, W. F. Prior Co., Inc.
2. Kasahara, M., and Noser, S.: Lead Poisoning in Infants and Young Children, *Zschr. F. Kinderh.* 55: 577, 1933—Abstract Am. J. Dis. Child. 52:1262, 1936.
3. Holt and McIntosh: Holt's Diseases of Infancy and Childhood, 10th Edition. Lead Poisoning, Chap. CLIII pp. 1188-1191. D. Appleton-Century Co., Inc.
4. Levinson, A., and Harris, L. H.: Lead Encephalopathy in Children, *J. Pediat.* 8:315, 1936.
5. Caffey, John: Lead Poisoning Associated with Active Rickets, *Am. J. Dis. Child.* 55:798, 1938.
6. Netzeley, Ralph E.: Lead Encephalitis, *Cal. and West. Med.* 46:306, 1937.
7. Aub, J. C., et al: Lead Poisoning, *Medicine* 4:1, 1925.
8. Kowaloff, Irving: Lead Poisoning, *Am. J. Dis. Child* 56:764, 1938.
9. Shelling, D. H.: Effect of Dietary Calcium and Phosphorus on Toxicity of Lead in the Rat, *Proc. Soc. Exper. Biol. and Med.* 30:248, 1932.

THE MODERN CONCEPT OF DIABETES*

A. J. Revell, M.D.

Pittsburg, Kansas

In the time allotted for this paper we shall discuss diabetes relative to its etiology, diagnosis and treatment.

White and Pincus¹ have proved definitely that diabetes is an hereditary disease and that it occurs most often in obese individuals. A defect in the Islands of Langerhans of the Pancreas, with a decrease in their ability to secrete insulin has always been considered to be the paramount cause, but in recent years there is accumulating evidence which points to the fact that the other endocrine glands are influencing and modifying factors. In view of these recent findings many of our problems associated with diabetes may now be solved. In the field of endocrinology rarely does one find a pathological process which can be wholly attributed to the dysfunction of only one gland, the usual thing is to find more than one gland involved. The pituitary gland seems to be the keystone of the endocrines which has the most bearing upon diabetes. It has been shown that the injection of a pituitary extract, from the median and posterior lobes, opposes the action of insulin and it is a definitely proved fact that there is a specific carbohydrate metabolizing factor present in the secretion of the anterior lobe, which when injected into animals produces hyperglycemia and glycosuria. This hormone is probably the reason that diabetes develops frequently in women at the menopause. It is thought that the estrogenic hormone produced by the ovary exerts a brake like effect upon the secretions of the anterior pituitary, therefore at the catamenia when the ovary ceases to function, the production of anterior pituitary hormone is accelerated. Tumors of the pituitary gland, such as acromegaly and Cushing's disease usually are complicated with diabetes. The most significant recent experimental evidence of the effect of the pituitary upon carbohydrate metabolism has been shown by Long and Lukens. It has long been known that the removal of the pancreas in a dog would result in the production of diabetes, but these workers have shown that the diabetes produced by the removal of the pancreas in a dog is alleviated by hypophysectomy or adrenalectomy.

At the present time it is generally agreed that there is a definite thyroid and adrenal stimulating factor present in the thyrotropic and adrenatropic fractions of the secretion of the anterior pituitary, therefore whether the effect of the thyroid and adrenals upon

Every war is a national calamity, whether victorious or not—General von Moltke—Except the war on tuberculosis.

*Presented at the 80th Annual Session of The Kansas Medical Society, Topeka, May 2, 1939.

carbohydrate metabolism is invested wholly in these glands or comes in part from the pituitary is not definitely known. The incidence of glycosuria and hyperglycemia is high among a large group of patients with thyrotoxicosis and a very small percentage of individuals with hypothyroidism have diabetes.

Adrenalin, the medullary secretion of the adrenal gland, is a well-known insulin antagonist, and causes an elevation of blood sugar when injected. Addison's disease, which is due to hypo-function of the adrenal cortex, is characterized by a low blood sugar, while the adreno-cortical syndrome, due to cortical tumors, has glycosuria and hyperglycemia.

Diabetes has been produced experimentally in animals by puncturing the third ventricle of the brain. The effect exerted by the hypothalamus alone, or through its relationship to the autonomic nervous system², are unknown factors which may be shown in the future to have definite etiological effect in the production of diabetes.

In the diagnosis of diabetes may we pause to impress upon each of you the importance of a detailed and complete history and physical examination. The cardinal signs and symptoms should be elicited, namely: polydipsia, polyphagia, polyuria, loss of weight, weakness, boils, carbuncles, dermatitis, pruritis, cataract, failing vision, gangrene and coma. A familial history of diabetes is important as is also the time in life the symptoms appeared, whether early in life, at puberty, childbirth, following a gain of an excess amount of weight, or at the menopause, as these are the periods when there is a marked change in endocrine function. The diagnosis of diabetes must be confirmed by laboratory tests and in our laboratory we make use of the following: urine examination, basal metabolic rate, blood cholesterol determination, fasting blood sugar determination, and when needed sugar tolerance determination. We realize that the average practitioner is not equipped to perform all of these tests, but the diagnosis of diabetes can usually be made by the presence of sugar in the urine, and it does not require elaborate equipment or technique to perform this simple test which may save us much embarrassment. Many of us have been chagrined to learn that we have passed up the diagnosis of diabetes in patients simply because we have been too lazy to examine the urine. For diagnostic purposes specimens of urine voided two hours after a hearty meal are best, as the glycosuria may be intermittent and not continuous throughout the twenty-four hours. Basal metabolic rates, fasting and repeated after a heavy protein meal, to demonstrate the specific dynamic action of protein give us much information relative to the function of the thyroid and pituitary glands.

The determination of blood cholesterol is very

essential in the management of the diabetic. Since the advent of insulin the whole picture of the mortality in diabetes has changed from the death of youth in coma to that of the older individual from arteriosclerosis. We ask the question "why do diabetics develop arteriosclerosis early in life?" And, at the present time the answer seems to be "the diet." Fat appears to be the main offender in the production of arteriosclerosis. Virchow³ found fat in the intima of the larger arteries and concluded that fat in the form of cholesterol esters was deposited there by imbibition from the blood stream, and that the more fat in the blood stream the more readily it would be deposited. Later on calcium salts link with the cholesterol in the lower layers of the intima and calcified arteries result. At the recent meeting of the American College of Physicians, Barker reported the high level of plasma lipids, especially cholesterol, found in all cases of arteriosclerosis obliterans, non diabetic in etiology, treated at the Mayo Clinic.

The prevention of arteriosclerosis appears to be dependent upon control of blood cholesterol, which in turn is associated with the amount of fat in the diet and its utilization by the body. All untreated cases of diabetes will present an elevated blood cholesterol. Therefore frequent blood cholesterol determinations are an excellent criteria to the efficiency of diabetic management.

Fasting blood sugar determinations and sugar tolerance tests give us an insight into the severity of the disease. Two methods are available for these tests, the conventional method which makes use of blood taken from the vein and the capillary method in which a small amount of blood is obtained from the finger tip or lobe of the ear. This latter method is more satisfactory in obtaining blood from children, and in cases requiring frequent determinations such as diabetic coma.

The treatment of diabetes is dependent upon six cardinal points which are: (1) The diagnosis of the etiological factor (2) diet (3) insulin (4) exercise (5) vitamins, and the most important and necessary of all, the education of the patient concerning his disease.

The successful clinician is the one who will take the time to explain in detail to his patient the physiology of the endocrines and their known relationship to carbohydrate and fat metabolism, the necessity of daily urine examinations at specified times, the action and need of exercise upon carbohydrate metabolism. Detail the accurate measuring or weighing of each article of the diet, together with the need of a calculated diet. Discuss insulin relative to its need, effect and symptoms of overdosage. Stress personal hygiene with particular emphasis upon the proper care of the feet and the complications associated with

this disease with the methods of preventing and combating them. The average diabetic who realizes the seriousness of his disease, and has some understanding as to its etiology and scientific management, will cooperate with his physician and will not stray from his regime, laughing up his sleeve because "he's putting over a fast one on his doctor."

It is our custom to see each patient frequently during the early part of the regime, or until the disease is definitely under control. We endeavor to hold his interest by attempting to teach him a little about diabetes at each visit. If one outlines the whole management of this condition in one or two visits one finds his patient totally confused about urine examinations, diets, scales, insulin, etc. After the diagnosis has definitely been established we give the patient a brief resume of diabetes and the principles of diet, then he is given a prescription for insulin, needles, and a syringe and is instructed to report at our office the next day with these and a permanent note book. At the succeeding visits he is taught the measurement of his diet, the technique of sterilizing the syringe and needles, and to measure and administer insulin. He is taught to check his urine for sugar three times a day, the results to be recorded in his notebook as blue, green, yellow, orange or red, together with the time the urine was voided. We give each patient a mimeographed sheet which reads as follows:

"To help prevent acidosis, which is a serious complication of diabetes, you should follow the following rules when you have an infection or feel indisposed in any way. (1) Call your doctor immediately, or if unable to get your doctor observe the following until you can contact him. (2) Secure the services of some one to wait on you (3) take an enema (4) go to bed (5) keep warm (6) drink a glass of fluids each hour, which may consist of, diluted orange juice, buttermilk, or soda pop. (7) Have your urine checked each time it is voided (8) never omit insulin when the urine contains sugar.

This sheet is pasted on the first page of his notebook. His blood sugar findings, other laboratory reports, weight, diet slip, insulin reactions or anything of note pertaining to his disease and the time of its occurrence is written in this book. The patient is instructed to bring this diary with him at each visit for check up and discussion. It is surprising the interest and ingenuity most patients show in compiling these logs. And, it has proved extremely helpful to us in keeping watch on the happenings of each day in the progress of our treatment.

One can readily conceive the importance of diagnosing the specific cause of hyperglycemia and glycosuria as having an important bearing on the success of treatment. Diet and insulin will have little

effect upon diabetes occurring in thyrotoxicosis, acromegaly or Cushing's Syndrome. In these conditions other medical aids, together with surgery or x-ray therapy, must be employed to alleviate the condition. In cases complicated with hypothyroidism desiccated thyroid is of great value, as is also estrogenic hormones in many cases of diabetes which manifest themselves at, or following, the menopause. When one encounters a case of diabetes which requires huge doses of insulin or in which the blood sugar fluctuates greatly from day to day on a fixed regime of diet, insulin and exercise, it has been our experience that after infection is ruled out one should investigate the whole endocrine system for the answer to his problem. We must also bear in mind that in highly nervous individuals sedatives may help to regulate the treatment.

Diet has always been considered the foundation of diabetic management and in the preinsulin era its regulation was the only hope of the control of this disease. This was attempted by giving excessive amounts of fats and minimizing as much as possible the carbohydrate intake. At present there are several schools of thought as to dietary regime, each has its arguments in favor of its particular diet. Few men, if any, still cling to the idea of high fat and low carbohydrate intake, as there is such a great loss of weight in the individual, with the great danger of acidosis and infection. Swinging to the other extreme we have diets in which fat intake is kept extremely low with practically no restriction on carbohydrate intake. As an example of this diet, Somajae⁴ advocates the restriction of fats to at least forty gms. per day and allows 200 to 300 gms. of carbohydrate daily. He states that the symptoms of diabetes are due to the inability of the body to utilize carbohydrates in the metabolism of fat and that by restricting greatly the fat intake, metabolism will be better, with less likelihood of the development of ketone bodies. He also feels endogenous insulin production is stimulated by large carbohydrate intake and regards glycosuria in the presence of a low fat diet as not cause for alarm. In all standard diabetic diets the protein requirements is figured approximately the same. It is fairly well agreed that the diabetic should be kept slightly under the weight considered normal for his age and height, therefore in the calculation of a diet for a diabetic we should consult a table for his ideal weight and not calculate the diet to his actual weight.

The two types of diet advocated most are those of Woodyatt⁵ and Joslin. Woodyatt's diet is based on the theory that the maximum amount of fat which can safely be fed is twice as much carbohydrate used plus half as much as the protein consumed. The advocates of this diet feel that in most cases little or

no insulin will be needed and that the cost of the diet is less to the patient. They feel that diabetes has little or no part in the production of arteriosclerosis.

Joslin favors the use of high carbohydrate diets with sufficient amounts of insulin to control the glycosuria.

We give in most of our cases a diet consisting of one gm. of protein per kilo body weight, with a carbohydrate to fat ratio of one and one-half gms. to two gms. of carbohydrate to one gm. of fat. The number of calories per day to be governed by the type of work the individual performs. A simple dietary scheme devised by Joslin, which can be easily modified, is as follows:

For an adult weighing seventy kilo. or approximately 150 pounds, he gives the following daily ration. Three slices of bread, one large serving of oatmeal, one egg, three oranges, four cups of three to five per cent vegetables, one-fourth pint of milk, one-fourth pint twenty per cent cream, two small servings of lean meat, three squares of butter. This provides 150 gms. carbohydrate, 70 gms. protein and 80 gms. fat, with a total caloric value of 1600 calories. By the use of the high ratio of carbohydrate to fat with sufficient insulin it is thought that the patient feels better, there is less likelihood for the formation of ketone bodies, and with the probability of maintaining a more normal blood cholesterol level, premature arteriosclerosis may be prevented.

Exogenous insulin was isolated by Banting and Best in 1921, and has proved to be one of the professions greatest gifts to humanity. Endogenous insulin is produced by the Islands of Langerhans of the pancreas where it is excreted into the portal circulation, there its function is to assist in removing glucose from the blood stream and convert it into glycogen which is stored in the liver, skeletal muscle, and cardiac muscle until needed by the body for the production of energy.

Tuttle⁶ believes there are two distinct types of insulin found in the body, the pancreatic insulin, which acts upon the glucose molecule in the blood stream in such a way as to cause its union with inorganic phosphates resulting in a glucophosphorous compound which migrates rapidly from the blood stream, thus accounting for the rapid fall in blood sugar. It is his contention that pancreatic insulin is in no way responsible for the conversion of glucose into glycogen but merely exerts an enzymatic effect in transporting glucose from the blood into the tissues of the liver and muscles where the glucophosphorous is transposed into glycogen by the action of cellular insulin, which he states is present in every cell.

In the diabetic individual a decrease in the amount

of insulin produced results in less glycogen being formed and results in hyperglycemia. Glycosuria manifests itself when the glucose in the blood stream exceeds the renal threshold of the kidney.

"How much insulin must be given a diabetic daily?" That is a question which cannot accurately be answered as the dosage is dependent upon several factors, such as the amount of insulin produced by the failing pancreas, diet, the amount of exercise performed, and the resistance the patient has to insulin. In general, the average dose is from ten to fifty units. Joslin feels that sufficient insulin should be given to keep the urine sugar free as he states there is definite autopsy findings which prove that hyperglycemia and glycosuria produce marked tissue damage if uncontrolled. A word of caution in the production of insulin reaction in elderly, or arteriosclerotic individuals, may be pertinent at this place. Severe myocardial and coronary damage may be produced in these individuals by the production of hypoglycemia, as glycogen is withdrawn from the myocardium in nature's attempt to raise the blood sugar to normal. It is our custom in these patients to permit an occasional green reaction of the urine to Benedict's solution, unless we are able to perform frequent blood sugar determinations.

There are now available, for clinical use in the physician's armentarium, four types of commercial insulin: (1) Regular or amorphous insulin (2) Crystalline zinc insulin (3) Protamine zinc insulin, and (4) Deposulin, all of which must be given hypodermatically. Insulin being a protein molecule has never acted successfully when given orally because it is digested by pepsin and trypsin of the digestive enzymes. Recently Lasch and Schonbrunner⁷ have claimed that by the addition of both acid and basic organic dyes to insulin, and compounding it into a tablet, the disintegration of insulin is prevented. They state they have demonstrated an unquestionable insulin action in the eight clinical cases studied by them under oral therapy. No toxic action on the liver or kidneys was observed. Nausea and vomiting followed high concentrations of the dyes. If these results can be confirmed, the peroral therapy of insulin holds distinct promise.

Amorphous or regular insulin therapy is well known to all of you and needs no special mention.

Crystalline zinc insulin produced by Saybun, in 1936, is of current interest.

It has been claimed that the action of this substance persists for six to eight hours, but according to clinical studies done with this product at Joslin's Clinic, the results of which will be published soon, there is no special advantage in using this preparation in preference to regular insulin. They have found its action similar in all respects to that of regu-

lar insulin. It may be used advantageously in individuals who are allergic to amorphous insulin.

In the non diabetic person there is a regulated flow of insulin from the pancreas into the circulation. Heretofore in the diabetic we have been handicapped in our method of imitating nature in this mechanism. We have attempted to level and maintain a normal blood sugar curve by three or four subcutaneous injections of insulin daily. Consequently there occurred wide variations in the blood sugar values resulting from the insulin being rapidly absorbed into the blood stream. Its maximum effect usually was evidenced two to four hours after injection. If this rate of absorption could be retarded it is obvious that a more normal blood sugar curve would result. To accomplish this, various methods have been tried, namely: (1) The injection of insulin as a suspension or emulsion in oil (2) Injections of insulin, together with vasoconstrictive substances (3) Injecting an insulin compound sparingly soluble in the tissue fluids.

In 1935 Hagedorn⁸ found that by combining the usual insulin hydrochloride of a PH 5.0 with a protamine substance, derived from the sperm of a species of trout, a turbid suspension of protamine insulin was formed, with its minimum solubility at PH 7.3 which approximates the reaction of the blood serum. When this suspension was injected subcutaneously the compound was broken down slowly and active insulin released over a relatively long period of time, thus allowing for a more prolonged and even effect upon blood sugar. At first there were several objections to the use of this product by the patient. In the first place it was very unstable at room temperature and the stability was only two to three weeks at refrigerator temperature. Secondly, the preparation was marketed in two separate vials which necessitated their mixing by the patient before use.

These objections have been overcome by the addition of zinc as suggested by Scott and Fisher^{9,10} and there is now available a stable turbid suspension dispensed in one vial, known as protamine zinc insulin, which has a duration of action of twenty-four hours or more. The dosage of this insulin is approximately the same as that of regular insulin required by the patient. It is superior to amorphous insulin due to the fact that the total daily dose may be given in one injection in most cases, although a second dose may be needed, or in severe cases regular insulin may also be required. Its use has resulted in less coma and insulin shock and there is belief it has a profound sparing effect upon hepatic tissue. Hypoglycemia reactions are infrequent and when they do occur, they differ materially from those induced by regular insulin. The onset is much slower and there is less hunger, sweating or visual disturbances. Instead;

severe headache is the rule with nausea and vomiting, common. Because of the slowness of action of this product, it is well to issue a word of caution regarding its use in diabetic emergencies such as infections, acidosis and coma. Protamine insulin may be utilized in these cases, but it must always be supplemented with sufficient regular insulin to bring about rapid chemical and clinical improvement.

Burnnengraber¹¹ has produced a slow acting insulin known as Deposulin which contains regular insulin combined with posterior pituitary extract which is designed to slow up the absorption of the insulin. Good results have been claimed with its use in mild and moderately severe diabetes. There are no apparent advantages offered which are superior to protamine zinc insulin and the presence of the pressor effect exerted by the posterior pituitary extract seems to make this insulin dangerous in the presence of arteriosclerosis or hypertension.

Exercise is a modifying factor which must be reckoned with in diabetic treatment. It is well known that the amount of insulin needed by an individual is inversely proportionate to the amount of exercise performed. In the performance of exercise energy is produced by muscle contraction. The process requires oxygen, phospho-creatin and glycogen: although glucose metabolism is impaired in the diabetic it appears that there is a definite improvement in carbohydrate metabolism exerted by exercise. It is very essential that all diabetics have regulated exercise but it is equally essential that a patient who does sedentary work be instructed to decrease his insulin dosage at any time he plans on strenuous exercise in order to prevent insulin reactions.

The role of the vitamins in the treatment of diabetics is gaining much favor. Mosonyi and Aszodi¹² demonstrated that the use of Cevitamic Acid and Thiamin Chloride had a definite lasting blood sugar lowering effect which they attribute to stimulation of the pancreatic islands to an increased insulin production. This effect is supposed to be due to vagus stimulation. We have used Vitamins C and B, individually, and together, in our patients and feels that two to five mg. of Thiamin Chloride before each meal has been of definite value in several cases in enabling us to reduce their insulin dosage. To obtain the maximum effect from Vitamin C large doses of Cevitamic Acid are necessary. The expense incurred in giving these large doses seem too great in return for the benefit derived from its use.

We wish to state, in conclusion, that it is our opinion that only the surface has been scratched in the study of this disease. We feel that each diabetic is a specific clinical entity and deserves the considera-

tion of time and study in his particular examination and diagnosis.

It is our belief that the management of this pathological process should be directed toward treatment of the manifested abnormal physiology of the entire individual rather than merely treating the laboratory findings of glycosuria and hyperglycemia.

BIBLIOGRAPHY

1. Treatment of Diabetes Mellitus: Joslin, Elliott page 47, 1935.
2. Vonderahe, A. R.: The Central Nervous System and Diabetes Mellitus: Ohio State Medical Journal 33:1315-1317, December, 1937.
3. Treatment of Diabetes Mellitus: Joslin-Elliott, page 328, 1935.
4. Somogyi, Michael: Newer Theoretical Concepts in Treatment of Diabetes—Read at meeting of American College of Physicians, St. Louis, April 21, 1937.
5. Endocrine Therapy in General Practice. Sevringhaus, E. L.: page 98, 1938.
6. Tuttle, George H.: The mechanism of Insulin Action, Medical Times 64:407-410, October, 1936.
7. Lasch, Fritz and Schonbrunner, Egon, Experimental Investigation of Oral Insulin Therapy with Added Organic Dyes. Klin. Wchnschr 17:1177-1180, August 20, 1938.
8. Hagedorn, H. C.; Jensen, B.; Norman, Kramp, N. B.; and Wodstrup, I.: Protamine Insulin J.A.M.A. 106:177, 1936.
9. Scott, D. A., and Fisher, A. M.: The Effects of Zinc Salts on the Action of Insulin.
10. Scott, D. A., and Fisher, A. M.: Studies on Insulin with Protamine Zinc. Ibid 58:18, 1936.
11. Schramm, Robert: Depot Insulin Therapy of Diabetes Mellitus with Deposulin. Deutsches, Arch F. Klin. Med. 182:402-412, August, 1938.
12. Mosonyi, Johan, and Aszodi, Zoltan: Influencing the Islets of Langerhans Through the Vagus by Means of Vitamins B and C: Klin. Wchnschr 17:337-344, March 5, 1938.

COMBINED SPINAL - INHALATIONAL ANAESTHESIA FOR MAJOR ABDOMINAL OPERATIONS

Paul H. Lorhan, M.D., and Thomas G. Orr, M.D.*

Kansas City, Kansas

The ideal anaesthesia for major abdominal operations is one which has a wide margin of safety, provides complete abdominal relaxation, and prevents the transmission of psychological stimuli to the higher centers.

Gas-oxygen and ether anaesthesia has been used with and without the endo-tracheal catheter. Local infiltration of the recti muscles, with and without supplemental inhalational anaesthesia and large doses of spinal anaesthesia have been used. These methods have proved relatively satisfactory. To produce sufficient relaxation inhalational anaesthesia must be given to a depth which is frequently dangerous. Spinal anaesthesia produces sufficient relaxation, but the inevitable fall in blood pressure, nausea, retching, and vomiting during intra-abdominal manipulation in the conscious patient is an undesirable feature. The duration of spinal anaesthesia is limited, and an

otherwise successful anaesthesia may wear off before the necessary operative work is completed.

Surgeons at the Lahey Clinic¹ have performed major abdominal operations with satisfaction under combined spinal and inhalational anaesthesia. Woodbridge² points out that cyclopropane-oxygen stops retching, brings a welcome unconsciousness to the patient, supplies a beneficial high proportion of oxygen, and does not increase abdominal respiratory movements. Dodd and Hunter¹ conducted a series of seventy operations under spinal percaïne anaesthesia supplemented by cyclopropane general anaesthesia with very satisfactory results. Sankey³ has been using low dosage of spinal anaesthesia in his cases and these are intentionally supplemented by inhalational anaesthesia of either nitrous oxide and oxygen or cyclopropane and oxygen before the surgical procedure is started.

A balanced anaesthesia is obtained with a small dosage of a spinal anaesthetic combined with inhalational anaesthetic. The patient is carried in a light plane of surgical anaesthesia according to Guedel's⁴ classification. Light anaesthesia has been found to raise the blood pressure a few points. It also stimulates a depressed respiration. Babcock⁵ warned against the dangers of the deeper planes of surgical anaesthesia, especially when accompanied by cyanosis.

A combined spinal-inhalational method produces an anaesthesia satisfactory to the surgeon, by the relaxation obtained from a spinal anaesthetic with freedom from nausea, vomiting, and retching of a light inhalational gas anaesthetic. The anaesthetist has the anaesthesia under control and is continuously supplying the basal requirement of oxygen throughout the course of the operation, which is essential for oxygenation of the higher centers following spinal anaesthesia with its concomitant circulatory depression.

The following report summarizes the results we have obtained in 100 cases of combined spinal-inhalational anaesthesia for major abdominal operations.

The method we employed was as follows: Pre-medication consisted of either sodium amytal or nembutal grains one and one-half to three, one to two hours before the operation, followed by morphine gr. one-eighth to gr. one-sixth with either atropine or scopolamine gr. one-one hundredth to one-three hundredth, forty-five minutes before operation. As a spinal anaesthetic agent either novocaine crystals seventy-five to 150 mg. or pontocaine six mg. to fifteen mg. dissolved in two to four c.c. of spinal fluid was used. The spinal injections were made in the third or fourth lumbar interspace with the patient in the left lateral position. Immediately after the

*From the University of Kansas Hospitals, Kansas City, Kansas.

spinal injection the patient was turned on his back in a ten degree Trendelenburg position. Cyclopropane or nitrous oxide was then administered. Cyclopropane was started after the breathing bag had been filled with oxygen, and a flow of 500 c.c. of cyclopropane with 300 to 400 c.c. of oxygen was established. Cyclopropane was given for two to four minutes, until the first plane anaesthesia was reached and then shut off. Anaesthesia was maintained at this level with additions of cyclopropane at various periods throughout the operation. Nitrous oxide was given at a ninety to ten mixture at the start of the induction and when surgical anaesthesia was reached the nitrous oxide was decreased until just a sufficient quantity was given to maintain the anaesthesia.

An analysis of table one below shows the variety of cases in which this method has been used. More than half of this number involved surgery of the gastro-intestinal tract.

TABLE I

1. Combined abdomino-perineal resections.....	22
2. Surgery of the large intestine.....	21
3. Surgery of the small intestine.....	14
4. Upper abdominal surgery.....	7
5. Lower abdominal surgery.....	9
6. Exploratory laparotomies	9
7. Release of intestinal obstruction	8
8. Genito-Urinary surgery	10
Total.....	100

The anaesthetic agents are listed in table two. This table shows that cyclopropane was used in eighty-five per cent of the cases and nitrous oxide in fifteen per cent of the cases. Because of the potential dangers of cyclopropane when the cautery is used, we are now substituting nitrous oxide in a greater percentage of cases. A novocaine-pontocaine mixture was used in nineteen cases.

TABLE II

1. Cyclopropane with novocaine.....	60
2. Cyclopropane with novocaine-pontocaine mixture	13
3. Nitrous oxide with novocaine.....	10
4. Cyclopropane with pontocaine.....	12
5. Nitrous oxide with novocaine-pontocaine.....	5
Total.....	100

Table three shows the quantity of spinal anaesthetic used in 100 cases. The dosage of novocaine in fifty-two of seventy cases was 100 mg. or less.

TABLE III

1. Novocaine	75 mgm.— 29
	100 mgm.— 23
	120 mgm.— 12
	150 mgm.— 6

2. Pontocaine	12 mgm.— 7
	15 mgm.— 5
3. Novocaine and Pontocaine.....	6 mgm.— 18
Total.....	100

The results have been good in this series. There was only one death which seemed to have a doubtful relationship to anaesthesia. This patient died five days after operation and at autopsy a partial collapse of the lung and peritonitis were found.

The duration of anaesthesia varied from one hour to three hours and forty-five minutes, the average length of time being about two hours.

The general condition of the patient on the operation table was found satisfactory in all cases, with the blood pressure maintained at a fairly normal level, the pulse of good quality and slow rate. The respiration at all times was under control with the use of the CO₂ absorption technique of administration. The color was good and no signs of oxygen want were noted as determined by increased depth and rate of respiration, pulse rate, and blood pressure.

The surgeon has expressed complete satisfaction with this method of anaesthesia, because of the marked relaxation that was obtained, allowing him to work with freedom in the abdominal cavity with an absence of pushing of the intestine and of delays caused by nausea, retching, and vomiting.

Patients have been completely satisfied with the pleasant sleep that has been induced. The elimination of psychic trauma and emotional distress experienced with a spinal anaesthesia alone has been eliminated.

Severe pulmonary complications occurred in but one patient who developed basal rales and pulmonary edema. Two patients had a cough, one a sore throat, one pain in the chest, and one laryngitis. At autopsy one case, an elderly man of seventy-eight, showed a partial collapse of the lung. The rarity of severe pulmonary complications may be due to the absence of vomiting with aspiration of foreign debris into the lungs, the rapid return to consciousness with the cough reflex being present at the completion of the operation, and the absence of intercostal paralysis which would follow a high spinal anaesthesia.

SUMMARY

A combination of spinal-inhalational anaesthesia was used successfully in 100 cases. The advantages of this combination are: (1) Marked abdominal relaxation obtained with small doses of spinal anaesthetic, (2) smoothness of the anaesthesia obtained with light gas inhalational anaesthetic, (3) absence of nausea, vomiting, and retching during the operation with its coincidental cerebral anoxemia and circulatory depression, (4) the controllability of the

anaesthetic, and the prevention of anoxemia by the continuous administration of oxygen to the patient by the anaesthetist.

BIBLIOGRAPHY

1. Dodds, Harold and Hunter, J. T., Cyclopropane "Sleep" with Percaine Spinal Anaesthesia. *Lancet*. March 25, 1939. 658-688.
2. Woodbridge, P. D., Recent Experiences and Present Trends in Anaesthesia. *Surgical Clinics of North America*. 15:1513-1524. 1935.
3. Sankey, R. G., Personal Communication.
4. Guedel, Arthur E., Inhalational Anaesthesia. The MacMillan Company, New York, 1937.
5. Maxson, Louis H., Spinal Anaesthesia, J. B. Lippencott Company, Philadelphia, 1929.

PARALYTIC ADYNAMIC ILEUS

C. E. Partridge, M.D.

Emporia, Kansas

Within the past few years certain observations and measures have come about which have greatly increased the armamentarium in dealing with the condition of so-called paralytic or adynamic ileus. It has been my privilege to recently make a comprehensive review of the literature on this subject so as to bring to your attention ideas and methods of others as well as those of my own.

Adynamic or paralytic ileus can be defined as a symptom complex consisting of pain, nausea, vomiting, distension and obstipation of the gut. Ileus is derived from a Greek verb meaning to twist. Adynamic ileus means a lack of physical strength. There is no mechanical hindrance to movement of intestinal contents. There are in adynamic ileus changes either in the nerve supply or changes in the bowel walls so that normal movements of the intestines are interfered with. The term, paralytic ileus is more or less a misnomer. Some authors^{1,2} prefer to call it intestinal incompetence. Others^{3,4} prefer to call it a "flat gradient" because there is a leveling of all the intestinal gradients and in experimental adynamic ileus in animals there is no paralysis of the gut.

Ochsner and Gage⁵ have classified this type of ileus as to causes.

I. Intra-abdominal

A. Peritoneal irritations.

- a. Traumatic
 1. Post operative
 2. Penetrating wounds
- b. Bacterial
 1. Peritonitis
- c. Chemical
 1. Extravasation of blood
 2. Perforated peptic ulcer
 3. Bile peritonitis
 4. Acute appendicitis

B. Vascular changes

a. Strangulation

1. Intra-mural distension following mechanical ileus
2. Extra-mural compression of mesenteric vessels

b. Mesenteric thrombosis

C. Extra peritoneal irritation

- a. Hemorrhage
- b. Infection
- c. Renal

II. Extra-abdominal

A. Toxic

- a. Pneumonia
- b. Uremia
- c. Empyema
- d. Systemic infection

B. Neurogenic

- a. Injuries to and diseases of the spinal cord
- b. Lead poisoning
- c. Fracture of lower ribs — irritation of nerves.

Traumatism and exposure during the operation are very important factors. Paralytic ileus is due to a newly developed peritonitis either traumatic in origin; use of large packs, rough handling, etc., or to causes which have been pre-existent at the time of operation¹². There are of course individual variations in response to trauma but the degree of adynamic ileus following an operation is directly proportional to the intra-peritoneal trauma and manipulation.

The toxins are believed to cause a hyperstimulation of the splanchnic nerves. Stimulation of the splanchnics cause inhibition of the intestinal activity^{8,9,10}. Experimentally it has been shown that a division of the splanchnics prevents adynamic ileus^{6,7}. There are two main origins of the splanchnic nerves. I. The major arises from five to nine inclusive dorsal ganglia and extend through the diaphragm to Coeliac ganglia behind the pancreas. II. The minor arises from the tenth to twelfth thoracic ganglia and also extends through diaphragm entering Coeliac ganglia near the renal arteries. III. From the Coeliac ganglia branches are sent to various plexuses chiefly the superior and inferior mesenteric and renal.

In diagnosis there is considerable difficulty experienced in differentiating between paralytic or adynamic and mechanical ileus. Adynamic ileus occurs earlier, the first twenty-four to forty-eight hours post-operatively and is characterized by an absence of intermittent colic pains. Paralytic ileus involves primarily the splanchnic nerves and the entire bowel is involved. Mechanical ileus involves a local sector of bowel and there is the intermittent colic pains. Any hollow viscus when compressed mechanically

and locally has this characteristic intermittent colicky pain.

Plain x-rays of the abdomen are of much value in diagnosis of any form of ileus. X-ray was first used in 1911¹¹. Dilated loops of intestine filled with fluid and gas occurs earlier in mechanical ileus and is more marked where there is interference with the blood supply to the bowel.

It has been suggested that excessive stimulation of splanchnics inhibits peristalsis. Then one would think splanchnic block would be a means of differential diagnosis between mechanical and paralytic ileus. This has been advocated^{13,14} but investigators have found that experimental splanchnic block in every case produced increased intestinal tone.

The main reason for a differential diagnosis between paralytic and mechanical ileus is the former must be treated very conservatively while the later should have little delay in surgery.

The plan of essential treatment will vary somewhat according to whether there is mechanical or paralytic ileus. In peritonitis there may be both types. There may be moderate or severe types of paralytic ileus. Nothing by mouth is the rule until all nausea has ceased. It is advocated by some¹⁵ that even proctoclysis should not be given. Application of heat to the abdomen and use of stupes has a logical basis since heat increases peripheral circulation thus decreasing splanchnic blood supply which in turn favors peristalsis and decreases intestinal secretion. Morphine has been shown by a number of workers^{16,17,18} to help prevent paralytic ileus and it should be used freely.

Intravenous normal or better physiological salt solutions have been shown to increase intestinal activity by ninety per cent⁵. If glucose is given where indicated one unit of insulin for each two gm. of glucose should be given to help metabolize to sugar. It has been shown that when glucose alone is given intravenously there is an inhibiting effect on the bowel which does not occur when insulin is given.

Pituitrin seems to be condemned by almost all writers. Pituitrin probably acts on the muscle cells in the walls of the colon and since adynamic ileus involves chiefly the ileum it would seem to be of no help. However some English authors¹⁹ seem to think it of value. Splanchnic and spinal anesthesia in the hands of most is of no value. In regard to spinal anesthesia²⁰ it has been explained that the effect in paralytic ileus is due to blocking of splanchnic inhibitory reflexes and allows the vagus motor reflexes to have full play. Such drugs as choline, acetyl choline, pitocin, peristalsin and physostygmmin have been investigated⁵ and physostygmmin gr. one-fiftieth is the only one found to have value clinically. Prostigmin of Hoffman LaRoche has proven in the

hands of some²⁴ to be very valuable in the prevention of post-operative distension and gas pains. This drug apparently acts on the parasympathetics.

Gastric lavage by an indwelling nasal catheter was first used by Westerman²¹ in 1910, and only recently has its use become extensive. The so-called trans duodenal decompression with a Levine tube has of recent years proven of great value. Always the treatment of adynamic ileus associated with peritonitis is ultra conservative. Intravenous infusions²⁴ of Hartmans or Ringers solutions replaces lost fluids and electrolytes and inhalations of oxygen in high concentrations is of great value. Solutions containing calcium and potassium are more effective than solutions of sodium chloride alone. It has been shown experimentally⁵ that hypertonic physiological salt solutions are much better and are used routinely at Tulane University. This solution is sodium chloride 11.7 per cent, potassium chloride 0.74 per cent, calcium chloride 54 per cent and sodium lactate 5.6 per cent. Sometimes the trans-duodenal tube will not decompress only parts of the ileum. Lennander²² in 1907, first advocated enterostomy. Therefore in paralytic ileus when the propulsive or parastalsis power is lost generally one may be able to decompress only particular loops, hence one or more ileostomies may be necessary in addition to the duodenal tube.

In conclusion it is important to differentiate between paralytic and mechanical ileus because in the former extreme conservatism is the rule. Physiological hypertonic salt solutions and glucose when indicated have proven more effective than normal saline solutions. Morphine sulphate given freely is a tonic to the bowel and does not seem to cause constipation. The improved trans-duodenal tube together with ileostomies, one or more when indicated have proven life saving. If various decompression tubes saline and glucose solutions are failing I believe one should not hesitate to relieve the distressed ileum with ileostomies.

REFERENCES

1. Long, LeRoy Downing; Southern Medical Journal, 26:350-53, Apr. 1935.
2. Long, LeRoy; Proc. Interstate Post-Grad. Assembly, 1924.
3. Mueller, E. F.; Uben den Paralytischen Ileus; Mett a. d. Grenzgeb d. Med. u. Chir., 41:417, 1929.
4. Alvarez, W. C. & Hosoi, K.; What Happened to the Unobstructed Bowel that Fails to Transport Fluid and Gas; Am. Jour. Surg., 6:569, 1929.
5. Ochsner, Alton, M.D., F.A.C.S., & Gage, I. M., M.D., F.A.C.S.; Adynamic Ileus; (From Dept. Surg. Tulane Univ.), Am. J. Surg., 20: 378-404, May 1933.
6. Hertz, G.; Beitrage zur Pathologie der Darmbewegungen; Mett a. d. Grenzgeb d. Med. u. Chir., 20:257, 1909.
7. Aral, K.; Experimentelle Untersuchung uber die Magen Darbewegungen bei Aukten Peritonitis; Arch f. exper. Path. u. Pharmacol., 94:149, 1922.
8. Gaskell, W. H.; The Involuntary Nervous System; N. Y. Longmans, Green, 1926.
9. Ochsner, A., Gage, I. M., Cutting, R. A.; Comparative Value of Splanchnic and Spinal Analgesia in the Treatment of Experimental Ileus; Arch. Surg., 20:802, 1930.
10. Phifer, Fred W., & Rae, Harold B.; Post-Operative Paralytic Ileus; Colorado Medicine, 200-4, May 1933.
11. Schwartz, A.; Die Erkennung der tieferen Dunndarmstenosen

- mittels des Röntgenverfahrens; *Wein klin Wchnschr*, 24:1386, 1911.
12. Mayo, W. J.; *Anesthesia; Surg. Gynec. & Obst.*, 50:117, 1930.
 13. Bartlett, W. Jr.; *An Indication for Early Operation in Intestinal Obstruction; Surg. Gynec. & Obst.*, 49:719, 1929.
 14. Robb, J. J.; *The Sympathetic In Acute General Peritonitis. A Clinical Study with Observations on Treatment; Brit. J. Surg.*, 19:634, 1932.
 15. Dvorak, H. J., Carlson, H. A., Erickson, T. C., Smith, V. D., & Wangenstein, O. H.; *Influence of Morphine on Intestinal Activity in Experimental Obstruction; Proc. Exp. Biol. and Med.* 28:434, 1931.
 16. Wilen, C. J., & Dragstedt, C. A.; *Action of Morphine on Intestine in Peritonitis; Proc. Exp. Biol. and Med.*, 28:1056, 1931.
 17. Plant, O. H., & Miller, G. H.; *Effects of Morphine and Other Opium Alkaloids of Muscular Activity of Alimentary Canal. Action on Small Intestine in Unanesthetized Dogs and Man; J. Pharmacol. and Exper. Ther.*, 27:361, 1926.
 18. Gray, H. T.; *Brit. M. J.*, 1:1161, 1930.
 19. Studdiford, W. E.; *Surg. Gynec. and Obst.*, 47:863, 1928.
 20. Westermann, C. W.; *Über die Anwendung des Dauermanagenhebers bei Nachbehandlung Schwerer Peritonitisfälle; Zentralbl f. Chir.* 37:356, 1910.
 21. Lennander, K. G.; *Ein Fall von Dünndarmvolvulus mit einen Meckelschen Divertikel nebst einigen Worten über Subakuten Ileus und über Gastrotomie bei Dünndarm Paralyse; Deutsche ztschr f. Chir.* 86:1, 1907.
 22. Hartmann, A. F., & Elman, R.; *The Effects of Loss of Gastric and Pancreatic Secretions and the Methods of Restoration of Normal Conditions of the Body; J. Exper. Med.*, 50:387, 1920.
 23. Levis and Axelman; *Modern Method for Prevention of Post-Operative Distension; Am. Jour. Surg.*, May 1936, pp. 308-12.
 24. Ochsner, Alton; *Complications of Appendicitis; Tri-State Medical Jour.*, Feb. 1938, p. 2012.

ACQUIRED ATRESIA OF THE VAGINA, CAESARIAN SEC- TION, AND RETAINED LOCHIA; FOLLOWED BY SEVERE LATE ECLAMPSIA

George Cowles, M.D., and Corbin Robison, M.D.

Wichita, Kansas

The patient, T. S., white, age forty-one, was referred to the senior author, after having been in labor for about fifteen hours. She was first seen in the hospital at about two a.m. of July 10, 1939. She stated that she had not been to a physician for pre-natal care.

This was her fifteenth pregnancy; all previous pregnancies and labors were normal with the exception of the fourteenth. At that time, twenty-eight months previous to admission, she had a difficult forceps extraction of a thirteen-pound baby in the home. Manual dilatation of the cervix was also done at that time. She then menstruated normally, and at regular intervals, until August 20, 1938. At her August and September periods the flow would stop for a day or so at a time, and then become re-established.

Physical examination on admission was negative, except for a large "tumor of pregnancy." Position was Occiput Rt. Posterior. The blood pressure was

140/75. Urinalysis showed a faint trace of albumen, and a few red blood cells. Rectal examination revealed nothing except three centimeters dilatation of the cervix, with the presenting part just above the ischial spines.

Seven hours after admission the dilatation was nearly complete, as determined rectally, but the membranes were still unruptured. Due to the failure of descent of the presenting part, a sterile vaginal examination was performed by the senior author. The vault of the vagina was found to be completely stenosed, so that it was impossible to pass a closed hemostat through to the cervix. Preparation for Caesarian section was immediately made. The operation was completed, using the low 'cervical' uterine incision and peritonealization. There was very little post-operative shock. A ten pound-two ounce male baby was obtained. The child's health was apparently good from time of delivery.

Post-operative care of the mother included intravenous fluids, and blood transfusions. Progress was good until the afternoon of the third day, at which time signs of peritonitis developed. These reached a peak on the evening of the fifth day, with an axillary temperature 105 degrees, pulse 100, respiration thirty. The uterus was firm and of normal height at that time. By the eighth day the temperature was again normal, and recovery seemed certain.

There was no discharge of lochia from the vagina at any time. The fundus remained palpable at about one half the distance from symphysis to the umbilicus.

On the eleventh day the patient had the back rest raised and ate lunch in a semi-sitting position. A few minutes later she complained of headache and pain in the abdomen, became restless, and suddenly entered a series of severe eclamptic convulsions.

Blood pressure190/110 Urea Nitrogen ...27.8 mgm%
Albuminuria2— Blood Calcium8.2 mgm%
There was no history of previous convulsions. A medical consultant concurred in the diagnosis of eclampsia. A total of seven severe eclamptic convulsions occurred during a period of two days. Treatment included morphine, barbiturates, and intravenous hypertonic glucose solution.

Following these episodes, recovery was fairly rapid, and the patient was dismissed on the twenty-seventh hospital day. At this time her blood pressure was 140/80. Physical examination was negative except for the presence of a firm uterus, half way to the umbilicus.

On August 23rd the patient was feeling well and complained of a rather copious amount of black, tarry discharge per vagina—no bright red blood.

(Continued on Page 42)

PRESIDENT'S PAGE

To the Members of the Kansas Medical Society:

May I first extend to each member of The Kansas Medical Society my best wishes for a Happy and Prosperous New Year. We have many reasons to be satisfied with the accomplishments of last year and an equal number of good reasons to look forward to this year with a feeling of confidence and of hopefulness. A hope that our country will be blessed with an increasing degree of prosperity and a confidence in the welfare of the future.

I want this first month of the year to speak to you of the opportunity that is afforded for our Women's Auxiliary to increase its activity and its effectiveness. May I urge that each component society attempt to enlist the interest of their wives in an active Auxiliary organization. May I secondly urge that this Auxiliary organization be not viewed as merely a social organization but that they create for themselves a definite program. The object of their program will be to first acquaint themselves with the problems of medicine, and the achievements of medicine and the objectives of organized medicine. Thus equipped, they will be able to carry this information to their other organizations and their other avenues of activity. As I visualize the opportunity and obligation of our Auxiliary organizations, it is to quietly educate themselves and equip themselves that they may be a definite aid in their other organizations in an effort to acquaint the public with the accomplishments and objectives of medicine. It is my feeling that they shall not launch, under the auspices of their Auxiliary organization, an educational campaign but the Auxiliary organization should so train its individual members that each of those members may be an active force in an educational campaign through the avenues of other organizations, be they church organizations, club organizations or strictly social organizations. If we can accomplish this and so equip our members that each of them is alert to an opportunity to further such an educational campaign it will argue well for the medical profession.

Again expressing the wish that this year will bring increased accomplishments to our organization and increased prosperity to each of our members, I beg to remain

Yours very truly,

C. C. Nesselrode, M.D., President.

EDITORIAL

DUES

The dues of the Society for the year 1940 will be \$10.00 per member. All members are requested to assist their secretary in the collection of dues by making prompt remittances.

PATHOLOGISTS

In the annual Presidential address before the American Society of Clinical Pathologists Dr. Thomas B. Magath followed a custom of that society in devoting his discussion to economic phases of the practice of pathology. Dr. Magath's sincerity and deep interest in scientific medicine rings true throughout his essay. His concern is for the welfare of the patient and his vision is that of applying the practice of clinical pathology without discrimination to all who need it. He challenges those who cling to the idea of private enterprise in pathology to meet the competition of growing and expanding public health laboratories. He states, "The problem is not, as you see it, just one of having the state laboratories turn over their work to private laboratories." He seriously questions whether any possibility exists of more than a minor transfer of duties from state to private laboratories.

The expansion of medical facilities to meet the exacting demands of scientific medical practice is a problem which concerns the medical profession primarily, because medical men know the needs of their clientele. The demand of doctors for more and more laboratory work has forced the pathologists into mass production methods. It has forced hospitals to develop and expand their laboratory departments and created a situation wherein pathologists are working on part time or full time salaries. There is a serious lack of trained pathologists and as a group they constitute the vanguard, the first specialty to become institutionalized in the practice of medicine. Their colleagues in the other departments of medicine have forced them into this position. As the social base requires it, other specialties will tend to become institutionalized. The observation of so-

cial trends indicate this conclusion. The laboratory is the link which brings together all those who are engaged in the practice of medicine. The pathologist is every good doctor's consultant. Considering this position as of so great importance and the demand for more trained men in this field, there should be no fear for the economic security of pathologists. The American pathologists should face the future secure in the knowledge of their value to society and with an expanding vision of their usefulness. R. B. S.

PRESIDENT'S HOSPITAL PROGRAM RECOGNIZES THE A. M. A. PLATFORM

"On December 22 President Franklin D. Roosevelt, in his regular interview with the press, gave definite intimation as to his point of view relative to proposed legislation in the field of health," The Journal of the American Medical Association for December 30 states in an editorial. After summarizing the interview the editorial goes on to point out that the reported views of the President are a recognition of some of the objectives of the Association's platform and that the facilities, help and advice of the Association's Board of Trustees and officers are available to the government in working out any sound plan for meeting immediately any health needs which may be demonstrated.

"According to a report from the United Press," the editorial continues, "he said that the administration is considering a program for federal construction of hospitals in areas where such facilities are lacking, and he intimated that the plan might be recommended to the coming Congress. According to the United Press, he said the program, if undertaken, would start modestly but could be enlarged as desired. No estimate of the cost has been completed, but the President emphasized, says the report, that it would cost less than the more extensive health and school programs proposed in bills introduced by Senators Robert F. Wagner, of New York, and Pat Harrison, of Mississippi.

"According to the United Press, his comments indicated that he is dissatisfied with both these measures. He said that the Wagner or Harrison bills would cost a lot of money and that the chief trouble

was in the requirements for states to match federal funds. The new program he outlined would provide that the government bear 100 per cent of the hospital construction costs, retain title to the institutions and build them only in areas where local interests offered satisfactory assurances that they would operate and maintain the institutions.

"Under a matched program, Mr. Roosevelt is said to have pointed out, those states which have the most money could obtain the most federal funds. "They already have the best hospitals and health conditions, he pointed out,' says the United Press report, 'while the poorer states have a lower health level and insufficient funds to obtain federal money on a matched basis. Since elimination of the PWA 55-45 matched money program, the President said, the federal government could afford to finance in a small way medical centers in those areas needing them. He suggested fifty hospitals as a start. He pointed out as an example one New York county of 100,000 population with six good hospitals and three Southern counties of the same population without any medical facilities. The cost of the program he has envisioned would not be great, but it would mark the first experimental steps to bring health facilities to those areas needing them most, he explained. The major part of the work would be done by the WPA as far as possible, he said. The Public Health Service and a committee of doctors would pass on the plans and determine the ability and willingness of localities to operate and maintain the institutions. The President said he had talked over the plan with a number of doctors and will discuss it soon with the American Medical Association.

" 'He said doctors from many locales had told him they were unable to raise capital to build hospitals but that if they could get small plants they could maintain and operate them. As outlined by the President, each institution would consist of a one story hospital building of two wings, one each for white and colored persons, and an administration building with clinic, operating room and laboratory. He estimated that each hospital would provide 100 beds at a cost of around \$150,000. The President emphasized that his program is no grandiose scheme for putting up hospital centers costing \$10,000,000 each and said he did not think the medical associa-

tion's objections to government health programs would apply to such small hospitals. The President said that Miss Josephine Roche, former Assistant Secretary of the Treasury, was remaining with his Inter-departmental Committee on Health, but he said it did not mean that Security Administrator Paul V. McNutt was being eased out of the health program. He said a story to that effect about McNutt was crazy and made out of whole cloth.'

"Thus the President has recognized some of the objectives of the platform of the American Medical Association. He has recognized the primary objection inherent in the principle of grants-in-aid. The American Medical Association has approved the development of medical facilities where need can be shown, with provision for local administration and control. It has opposed the grandiose plans of the Wagner bill. The Board of Trustees and the officers of the American Medical Association have repeatedly offered their facilities and help and advice to the government in working out any sound plan for meeting immediately any needs which may be demonstrated."

CANCER CONTROL

THE PROGRAM OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Frank L. Rector, M.D.*

Evanston, Illinois

Being concerned with the appalling rise in cancer deaths, especially among women in their most important age periods, that of child bearing, a group of obstetricians and gynecologists met in 1913 to consider ways and means of improving the situation. It seemed to these physicians that if the general public only knew what could be done to reduce the number of needless deaths a great many lives could be saved.

To accomplish this result a program of public education was agreed on as the most suitable method of attacking this problem. Accordingly, the Ameri-

*Field Representative, American Society for the Control of Cancer, New York, N. Y.

can Society for the Control of Cancer was organized and began to function in January, 1914.

The objectives of the American Society for the Control of Cancer are to reach every person as rapidly as possible with the information that many of the present cancer deaths are due to neglect because of ignorance of certain fundamental facts. Among the most important of these facts are:

1. Early cancer is curable. Fifty per cent of annual cancer deaths could be prevented by prompt and intelligent action on the part of patients and their physicians.
2. The periodic medical examination by a competent physician is the best means of detecting cancer in early and curable stages.
3. There are certain signs of early cancer, danger signals, that the intelligent individual should know and act on in order to protect himself from the serious development of cancer in his own body.

These danger signals are:

1. A persistent lump, especially in a woman's breast.
2. A sore that does not heal, particularly about the face, mouth, or lips.
3. An unnatural bloodstained discharge from a natural body opening.
4. Persistent indigestion.
5. Sudden changes in size or color of moles and warts.

Realizing that the physician was the one person in every community capable of carrying this information to the public, the American Society has from the beginning of its activities looked to the medical profession for assistance and guidance in its public educational activities. No other members of the community, especially lay persons, have the information that will enable them to speak with authority on the subject of diagnosis, treatment, and prevention of this disease. It has always been and still is the policy of the American Society to undertake an educational program only when the medical profession in the community concerned is favorably inclined and will sponsor the undertaking.

This policy has been justified many times over by the cordial relations that have been maintained throughout the country with the various medical organizations.

Another policy of the National Society has been to refrain from recommending any one physician or hospital in any community as better prepared to care for cancer than other physicians or hospitals in that community. Requests, at times insistent, that definite recommendations be made for the "best cancer specialist" and hospital are met with the frank advice to see your family physician, as he knows best

what is the local situation regarding the handling of the disease.

After the National Society had experimented for several years with various types of lay education it realized that in certain instances the advice given to laymen to seek competent advice from physicians and hospitals could not be followed. This was so because the facilities were often lacking even in large population centers and patients were either denied the service they had been told was their due, or were sent to great distances for care, often a most expensive experience. To meet this situation, the National Society placed medical representatives in the field to assist so far as possible in developing facilities where they did not exist and in helping to organize existing facilities to care better for the cancer patients coming in contact with them. This activity continued for about five years during which time there was a great improvement in facilities for the care of cancer patients and in the appreciation by physicians all over the country of what was necessary to render modern care in the light of available scientific information about the disease.

Having brought about a marked improvement in facilities for the care of such patients, the National Society again turned its attention to public education. The machinery for getting the facts about the prevention and control of cancer to the public was provided through the Women's Field Army of the American Society for the Control of Cancer. The officers of this Field Army are recruited from the ranks of the influential and capable women in each state, and their activities are directed and controlled by committees selected from the state medical organization. Often the Executive Committee of the Field Army is composed primarily of the Cancer Committee of the State Medical Society with the addition of other interested professional and lay persons. A majority vote is always kept in medical hands in order to assure a sound and constructive program.

The National Society's judgment in adopting this principle has been amply demonstrated in the forty-six states where this program is now operating. In none of these states has there been any difficulty in keeping the interest of the physicians or the lay public stimulated to maintain a constructive and worthwhile activity. Today hundreds of physicians are directing and supporting the Field Army program and more than 23,000 lay women are actively connected with its activities in official capacities. Well over 150,000 women have given financial support to the work, and many times that number have been benefited by the educational work over the entire country.

Almost without exception, physicians are seeing an increasing number of patients who have or suspect

they may have cancer. Many of these patients with cancer are seeking medical help in early and hopeful stages. In time, this will surely and favorably affect the number of cancer cures.

One of the first states to fall in line in this nationwide lay educational movement was Kansas, where the medical profession promptly assumed the active direction and supervision of the program, and where great progress has been made in reaching all sections of the state with the hopeful facts about this disease. The Cancer Committee of The Kansas Medical Society has given unstintingly of time, sound advice and encouragement to the Field Army program, and each year is extending its influence and accomplishments to the entire state area.

TUBERCULOSIS CONTROL

GENITAL TUBERCULOSIS*

Eli A. Miller, M.D., and Mischa J. Lustok, M.D.

At the Sanatorium of the Jewish Consumptives Relief Society, sixty-one (4.7 per cent) of 1316 male patients admitted in an eleven-year period, had genital tuberculosis.

Genital tuberculosis may occur at any age but the vast majority of patients range from twenty to forty years. The younger the patient the more virulent the infection. Genital tuberculosis is secondary to some other tuberculous focus in the body, usually the lungs. Ninety-five per cent of these patients had associated far advanced pulmonary tuberculosis and 86.8 per cent had sputum with tubercle bacilli. The infection may reach the genital tract directly by way of the blood stream, by way of the lymphatics and, secondarily, by continuity of tissue. The seminal vesicles and prostate are the primary seat of the genital tuberculous infection (though the epididymis gives more pronounced symptoms) and also the focus from which the bladder and kidneys in many cases are affected.

PATHOGENESIS

There are two general theories concerning the pathogenesis of tuberculosis of the male genital tract:

1. That the prostate and seminal vesicles are involved primarily in the genital system and that the disease may remain localized or spread as descending genital or ascending renal tuberculosis.

2. That the prostate and seminal vesicles are in-

involved secondarily from other urogenital organs by dissemination through the lumens or walls of hollow viscera connecting them, ascending genital or descending renal tuberculosis.

The authors believe that the disease most frequently starts in the vesicles and prostate but may occasionally start in the epididymis and that the mode of infection is primarily hematogenous.

DIAGNOSIS

The difficulty in accurate diagnosis of the scrotal and prostatic masses has been emphasized frequently, yet the chief underlying cause is incomplete investigation.

The only method available for the examination of the prostate and seminal vesicles is palpation with the finger in the rectum. In the early stages of the disease no change may be demonstrable by this means of examination, but in the vast majority of cases definite signs are present. Irregular, firm but not stony hard nodules in the prostate recognized by means of touch indicate extensive involvement of this organ. Likewise when the seminal vesicles are felt as pencil-like bands, extending in an upward and outward direction from the upper margin of the prostate, extensive involvement of these organs is indicated.

Examination of the external genitalia is best done with the patient in a standing position facing the surgeon. Observations are made of alterations in the normal rugose appearance of the skin of the scrotum, the shape of the testicles and their relative position in respect to each other. Changes in the scrotal skin are sometimes a valuable guide, as shown by a smoothing out of the rugae and a wasting of the cellular tissue immediately beneath the dermis. Adhesion of the skin to the epididymis is a well known sign, as is also a sinus discharging creamy pus. A comparison of the mobility of the two testicles is sometimes helpful. A normal organ can be moved freely within its covering, particularly in the upward and downward direction. This movement is often restricted when tuberculosis of the genital organs is present. In the early stages a soft or even fluctuant mass at the site of the epididymis and involving it is present in a large percentage of cases. If untreated, it will result in ulceration and formation of a chronic sinus discharging pus or it will become a hard fibrotic or calcific mass. Late in the disease the epididymis may entirely lose its identity or, if it can be palpated, will be craggy and nodular. The vas becomes thickened and has bead-like prominences.

CLASSIFICATION

Genital tuberculosis has the same pathological characteristics as tuberculosis elsewhere in the body

*Genital Tuberculosis, Eli A. Miller, M.D., and Mischa J. Lustok, M.D., *Jour. of Amer. Med. Assn.*, Vol. 113, No. 15, Oct. 7, 1939.

and a discussion of it must take into consideration the clinical-pathologic type of tuberculosis, as is done by the phthisiologist in classifying pulmonary tuberculosis. The authors have classified their cases into three groups, (a) catarrhal, eight cases; (b) ulcerative, twenty-one cases and (c) fibroid, thirty-two cases. (These subdivisions are carefully defined in the article.)

PROGNOSIS

The prognosis of genital tuberculosis does not depend entirely on the prognosis of the associated pulmonary lesion, as the authors discovered by comparing their series of cases with a comparable series of pulmonary tuberculosis without genital involvement. In fact, the presence of genital tuberculosis adds considerably to the gravity of the general disease and shortens the life expectancy. At the end of a one to eleven year period of observation, only 34.4 per cent of the authors' patients were alive.

TREATMENT

The surgical treatment recommended varies from a careful resection of the infected focus to the complete removal of the seminal tract. The immediate mortality rate of radical surgical management, the persistent draining sinuses that are frequent sequelae of such intervention and the false rationale of removing a single focus and leaving the primarily infected prostate, have placed this form of therapy in general disrepute among phthisiologists and urologists versed in the management of tuberculosis.

The beneficial effect of ultraviolet therapy in extra-pulmonary tuberculosis has been well known for many years. It is logical to choose a form of therapy which will lend itself to sharp localization to the desired areas, that is the prostate, the seminal vesicles and the epididymis thus producing the maximum local effect without doing any general harm. Irradiation of the epididymis alone has been common practice among the men who advocate this form of physical therapy for genital tuberculosis. It is the authors' belief that if radiation were given with equal intensity to the prostate and seminal vesicles, the most frequent primary seat of tuberculous infection in the genital tract, the result would be more certain and more rapid reactivation would be less likely to occur.

The authors describe at some length their method of applying light therapy by means of the cold quartz lamp and report encouraging results in the treatment of the catarrhal and ulcerative types.

Teach the tuberculosis patient to regard symptoms as red and green signal lights and not something to worry about.

NEWS NOTES

SOCIALIZED MEDICINE

A matter of interest to physicians pertaining to the question of socialized medicine is the action taken by the National Grange at the annual convention of that organization held in Peoria, Illinois, during November. The Grange which has a membership of more than one million farm persons, adopted a resolution opposing the Wagner Act and socialized medicine in general and instructed its committee on legislation to oppose all proposals of this kind in the present Congress.

Of particular interest to Kansas physicians in this regard is the fact that the movement on behalf of the above resolution was led by Mr. C. C. Cogswell of Pretty Prairie, Kansas, formerly a member of the Kansas Tax Commission and now Supervisor of State Farms of the Kansas State Board of Administration.

Another interesting lay reaction on this subject is the following editorial which appeared recently in the *Christian Science Monitor*:

"Nearly unanimous refusal of the 1,000 physicians of New Zealand to accept a State-guaranteed annual income of \$7,500, provided they co-operate with the Government's socialized medicine law, illustrates the attitude toward compulsory sickness insurance of many doctors in every country. The sum offered the New Zealanders is more than the average doctor there earns.

Motives of doctors in the United States who have opposed the compulsory insurance plan have been questioned by some skeptics, who appear to think the medical men are afraid their earnings will be reduced. Many thousands know of the philanthropy of the better class of physicians. Some estimates of the annual amount of free service given by American physicians place it at more than \$300,000,000 a year.

Obviously the current opposition of organized medicine to the interference of government is based on higher than mere monetary grounds. As the American Medical Association declares, compulsory sickness insurance may be harmful to patient, physician and state."

OSTEOPATHS

Mr. W. H. Edmundson of Fredonia, attorney for the Wilson County Hospital, filed a motion to make more definite and certain on January 6th, in the case of Gafney v. the Wilson County Hospital which is now pending in the Kansas Supreme Court. The petition filed in the case contains broad allegations that the plaintiff claims to have been denied numerous privileges in the Wilson County Hospital, and does not state in detail the actual basis of his suit. The motion to make more definite and certain has the effect of requesting the court to order Gafney to state in detail the dates, instances, and circumstances upon which his objections are based. If the motion is upheld the plaintiff will find it necessary to re-vamp his petition in whole or part as the court may order. If the motion is overruled it will probably be necessary for other pleadings to be filed and for the case to proceed upon other issues.

Attorneys for Gafney in the case, recently filed a motion to dismiss on behalf of H. C. Wallace who had been a plaintiff in the case and who died during November. The

motion was approved by the Kansas Supreme Court on December 31st, and this therefore will leave Gafney as the only plaintiff.

Opinions are being received on the demurrers filed by the osteopaths in the injunction cases now pending in various District Courts. It is probable these cases will proceed to trial on the dates set by the District Judges.

Briefs are now being filed in the case of the Kansas State Osteopathic Association v. William H. Burke, Collector of Internal Revenue, now pending in the United States Circuit Court of Appeals and the trial of this case has been set for January 24th.

PNEUMONIA PROGRAM

The Kansas State Board of Health recently requested that the Society appoint an advisory committee on pneumonia to consider ways and means wherein funds available through the United States Public Health Service might be advantageously utilized for a Kansas pneumonia control program. Dr. C. C. Nesselrode, President, appointed Dr. W. H. Algie of Kansas City; Dr. F. L. Loveland of Topeka; Dr. John Porter of Concordia; and Dr. H. N. Tihen of Wichita, as members of a special advisory committee for this purpose. The committee held its first meeting in Topeka on January 4th and prepared the following recommendations for consideration by the Kansas State Board of Health.

That a pneumonia control program be instituted.

That the program consist of free provision of sulapyridine, pneumonia serum and pneumonia laboratory services to indigent persons.

That sulapyridine and pneumonia serum depots be established in various parts of the state to make these supplies easily accessible to doctors of medicine.

That a fee schedule be adopted to enable the provision of the laboratory services under the program and that authority be given for these services to be obtained thru any adequately equipped laboratory, approved by the Kansas State Board of Health.

That the program be made available to all duly registered doctors of medicine regardless of whether or not they are members of a county medical society.

That the certifications as to indigency be left to physicians with the request that physicians attempt to conserve the supplies for use by persons who otherwise would find it difficult to defray the cost of these services.

That the establishment of depots and the institution of other elements of the program be left insofar as possible to the recommendations of the county medical societies.

That to enable scientific study of the efficacy of serum and sulapyridine in the treatment of pneumonia a requirement be made for standardized case reports to be filed with the Kansas State Board of Health in every instance where the above supplies are used.

The recommendations made by the advisory committee will be presented at a meeting of the Kansas Board of Health to be held in Topeka on January 14th. If the program is approved it will be announced to the county medical societies immediately. It is believed that an amount of \$10,000.00 would be available for the purpose for the remaining portion of the pneumonia season and that additional funds probably will be available in succeeding years if the program is deemed successful.

COMMITTEE

Following recommendations received from the Society Committee on Maternal and Child Welfare and the Kansas Academy of Pediatrics, it has been decided that the work of the Committee on Maternal and Child Welfare will hereafter be divided between two new and separate committees—a Committee on Maternal Welfare and a Committee on Child Welfare. It was believed that the volume of work assigned to the present committee and the relatively different work pertaining to the fields of pediatrics and obstetrics, make this action advisable.

Dr. C. C. Nesselrode, President, plans to announce the membership of the new committees within the near future.

COUNCIL MEETING

The annual mid-winter meeting of the Council will be held at the Hotel Jayhawk in Topeka, on January 28th, commencing at one p.m.

Members who desire to attend are invited to do so and members who wish to present matters to the Council are requested to notify the Society central office.

WESTERN SURGICAL

Topeka was selected as the next meeting place of the Western Surgical Association at the meeting of that organization held at Los Angeles, California, on December 15-16. The meeting is to be held in Topeka during the early part of December, 1940.

Dr. W. M. Mills of Topeka was elected First Vice-President of the Western Surgical Association at the Los Angeles meeting.

FARM SECURITY

The Farm Security administration recently issued the following report pertaining to F. S. A. Medical plans now operating in Kansas:

Total Number of Families Included.....	1884
Total Number of Persons Included.....	10646
Amount Paid for Physicians Services during	
October	\$3,655.86
Amount Paid on Drugs Furnished during October	761.47
Amount Paid to Hospitals during October.....	602.58
Amount Paid to Dentists during October.....	499.54

ANNUAL MEETING

The Kansas Tuberculosis and Health Association held its annual Board of Directors meeting in Topeka on December 29th.

The following officers were elected: Dr. C. E. Coburn of Kansas City, President; Dr. F. A. Trump of Ottawa, Vice-President; Miss Luella Taylor of Independence, Vice-President; Mr. Theo C. Mueller of Topeka, Treasurer; Dr. C. H. Lerrigo of Topeka, Executive Secretary; Dr. F. C. Beelman of Wichita, and Mr. Elmer E. Euwer, Attorney, of Goodland, as Directors.

A budget amounting to \$21,860.00 was adopted for the 1940 expenditures of the organization.

The following were included in reports presented at the meeting:

"In the report of the Executive Secretary reference is given to service rendered to physicians of Kansas in

1939, both by bringing eminent specialists to Kansas for meetings and demonstrations and by providing educational films and the booklet "Diagnostic Standards." This service has been warmly appreciated by the medical men as evidenced by letters of thanks from secretaries of the medical societies. Such service will be continued. It would scarcely seem necessary to budget any definite amount but we shall expect to pay expenses of visiting physicians when and if authorized by the Executive Board."

"The Committee on Tuberculosis Control of The Kansas Medical Society is an important factor in the backing that it gives to the control of tuberculosis in Kansas. Our Association is represented at every meeting of this Committee. In all respects it gives strength to the program of work that we have outlined year by year for our own guidance and it goes farther than we can do because of its advisory relations with all of the physicians of Kansas."

HEALTH UNIT

The County Commissioners of Cherokee County announced on December 13th that Dr. J. W. Spearing, formerly of Cimarron, had been employed to serve as full time health officer for that county.

Dr. Spearing's office will be in Columbus. He will be assisted in the institution and conduct of his work by an advisory committee of the Cherokee County Medical Society. One of the major aims of the program will be a survey of Silicosis and Tuberculosis in that area.

TUBERCULOSIS "CURES"

Information has been received that the Post Office Department has labeled as fraudulent certain preparations sold under the name of C. E. Wray of Salina and that such have therefore been barred from the mails. The preparations consisted of "Wray's Tubercular Compound," "Hot Shot Liniment," "Liver Tablets" and "Kidney Tablets" most of which were claimed to be specifics for the cure of tuberculosis.

Wray has in the past engaged in the diagnosis and treatment of tuberculosis and other conditions despite the fact that he has no license to practice healing in this state. He was enjoined from further practice of medicine on March 11th by the District Court in Saline County in a case filed by the Attorney General and the county attorney.

MEDICAL CONFERENCE

The National Conference on Medical Service (formerly the Northwest Regional Conference), will hold its Fourteenth Annual Meeting at the Palmer House, Chicago, Sunday, February 11, 1940. All state medical societies have been invited to send representatives to the Conference, designed to provide a medium for the verbal exchange of information on progressive medical service activities being conducted throughout the United States, and to discuss the solution of problems arising from the distribution of medical service to all classes. The Conference is not official nor political, is not connected with any other organization or committee, and its deliberations result in no resolutions or motions. It is informal, has no dues, by-laws, or formal organizational structure.

The Conference has been successful because it affords

an opportunity for physicians who are officially associated with or personally interested in medical economics, to exchange ideas for the good of the profession and the public.

The 1940 program, designed to give sound practical information, includes symposia on group medical care and group hospitalization programs, the allocation of federal funds to the states, the Washington scene, effective public relations by physicians, and medical welfare programs (including the federal assistance groups, outdoor relief group, and medical and surgical care in hospitals).

Seventeen men, representing as many states in the Union, will be on the program of this one-day meeting. It is anticipated that some thirty-five states will send representatives to the Conference.

All talks will be presented verbally—no manuscripts allowed—and will begin and end on time. The meeting will start at 10:00 a.m. and end at 4:15 p.m.

Past officers of the organization are Wm. F. Braasch, M.D., Rochester, Minn.; C. B. Wright, M.D., Minneapolis; Otho Fiedler, M.D., Sheboygan, Wis.; J. F. D. Cook, M.D., Langford, South Dak.; Benjamin F. Bailey, M.D., Lincoln, Neb.; Philip H. Kreuscher, M.D., Chicago; Oliver J. Fay, M.D., Des Moines, Iowa; R. L. Sensenich, M.D., South Bend, Ind.; Carl F. Vohs, M.D., St. Louis, Mo.; E. A. Meyerding, M.D., St. Paul, and J. George Crownhart, Madison, Wis.

L. Fernald Foster, M.D., Bay City, Michigan, is President of the National Conference; and Forrest L. Loveland, M.D., Topeka, Kansas, is Secretary.

SHAWNEE COUNTY MEETING

Mr. George Crownhart, Executive Secretary of the Wisconsin State Medical Association, was the speaker at the annual meeting of the Shawnee County Medical Society in Topeka on December 11th. The title of Mr. Crownhart's talk was "Looking at Sickness Insurance Abroad." His remarks were based upon a trip he had made to England, France, Germany, the Scandinavian, and other foreign countries during 1938, for the purpose of study of health insurance systems in these nations.

Mr. Crownhart also spoke on a similar subject before the Topeka Rotary Club on the same day. Approximately 200 physicians from various parts of the state heard his talk at the Shawnee County Medical Society meeting and the members of Shawnee County Medical Society were guests at the Rotary meeting.

Mr. Crownhart substituted on the program for Dr. Rock Sleyster, Wauwatosa, Wisconsin, President of the American Medical Association, who was unable to be present by reason of illness.

PHYSICIANS' COMMITTEE

The National Physicians' Committee for the Extension of Medical Service, was organized in Chicago, on November 18. The reasons for forming this new committee, according to the literature released, are as follows:

Medicine is confronted with two new sets of conditions. On the one hand, widespread unemployment, low farm income, and the continuation of conditions of general depression have made it difficult for an ever increasing number of people to pay for the best medical service and proper hospitalization out of earnings.

On the other hand, there is the trend—world-wide in scope—toward governmental paternalism and the false, suicidal doctrine that the "state" can provide a service and a security that the people cannot otherwise obtain. As related to medicine, the implementing of this concept would effect revolutionary changes in both the practice of medicine and the underlying philosophy which has given it the dynamic quality that resulted in world-wide leadership.

If ethical and scientific standards are to be maintained, the independence of American medicine preserved and the public interest best served, American physicians must:

1. Make possible the providing of medical service to the indigent and those in the low income groups, and insure the most widespread distribution and the most effective methods and equipment in medicine and surgery.

2. Assume the responsibility of countering destructive propaganda by familiarizing the public with the facts in connection with the methods and the achievements of American medicine.

Resolved, That, the National Physicians Committee for the Extension of Medical Service is a nonprofit, nonpolitical organization for maintaining ethical and scientific standards and extending medical service to all the people, interested in preservation of national health to safeguard the independence of American medicine.

At the meeting the following officers were elected: Dr. Edward H. Cary, Dallas, Texas, chairman; Dr. Austin A. Hayden, Chicago, secretary; and Dr. N. S. Davis III, Chicago, treasurer. A central committee of more than 800 physicians is being formed, with all states represented. Some of those already listed on the central committee are as follows: Drs. Howard Morrow, San Francisco; Charles W. Mayo, Rochester, Minnesota; Herman L. Kretschmer, Chicago; Charles Gordon Heyd and Haven Emerson, New York.

The Executive Board includes Dr. Edward H. Cary, Dallas, Texas; Dr. Austin Hayden, Chicago; Dr. N. S. Davis, III, Chicago; Dr. Irvin Abell, Louisville, Kentucky; Dr. F. F. Borzell, Philadelphia; Dr. William F. Braasch, Rochester, Minnesota; Dr. John A. Hartwell, New York; Dr. Roger I. Lee, Boston; Dr. Alphonse, McMahon, St. Louis, Missouri; Dr. E. H. Skinner, Kansas City, Missouri; and Dr. Charles B. Wright, Minneapolis, Minnesota. Offices are at 700 North Michigan Avenue, Chicago and Mr. John M. Pratt will be the executive administrator.

Kansas representatives appointed on the Central Committee are as follows: Dr. E. S. Edgerton, of Wichita; Dr. J. F. Gsell, of Wichita; Dr. C. C. Nesselrode, of Kansas City; Dr. H. L. Scales, of Hutchinson; Dr. H. L. Snyder, of Winfield, and Dr. W. M. Mills, of Topeka.

MINUTES

A meeting of the Committee on Maternal and Child Welfare was held in Topeka on November 12, 1939.

Members present were: Dr. Ray A. West, Wichita, Chairman; Dr. L. A. Calkins, Kansas City; Dr. C. C. Merideth, Emporia; Dr. F. P. Helm, Topeka; Dr. H. R. Ross, Topeka; Dr. R. F. Boyd, Topeka, and Dr. Porter Brown, Salina. Clarence G. Munns was present as Executive Secretary.

The minutes of the last meeting were read and approved. Clarence G. Munns reported that the pamphlet on Ma-

ternal and Child Welfare to be published by the committee is now in the possession of the Editorial Board, and that it is believed publication of this in the Journal will be commenced within the near future.

Discussion followed concerning the recommended rules for the handling of obstetrical cases adopted by the committee last year. A motion was made by Dr. Calkins, seconded and carried, that the committee present a resolution on this subject for consideration by the Kansas Hospital Association at its next annual meeting; that this resolution contain the suggested rules adopted by the committee: a statement concerning the belief of the committee as to the results these rules will accomplish, and the hope of the committee that the Kansas Hospital Association will adopt the rules as standard procedure for all Kansas hospitals; that the rules also be rebulletinized by the committee to the county medical societies; and that the Kansas State Board of Health be asked to prepare and issue a similar bulletin on this subject.

Upon a motion by Dr. Calkins, seconded and carried, it was agreed that Dr. Helm, Dr. Ross, and Dr. West should serve as sub-committee to discuss future Kansas post-graduate programs on maternal welfare, and that a report on this subject be made at the next meeting of the committee.

Dr. Ross presented a report concerning Social Security Act, and Kansas State Board of Health maternal welfare programs.

Dr. Calkins, Dr. Merideth, and Dr. Ross were appointed as a sub-committee to discuss the possibilities of conducting mothers training classes throughout the state on prenatal and post-natal subjects. The sub-committee was asked to present a report on this subject at the next meeting of the committee.

Upon a motion by Dr. Calkins, seconded and carried, it was agreed that Dr. West should recommend to the Kansas State Board of Health that a method be devised wherein Wassermann and Kahn examinations can be required on every pregnant woman.

A motion was made by Dr. Merideth, seconded and carried, that Dr. C. C. Nesselrode, President, be advised that the committee endorses the recommendation of the Kansas Academy of Pediatrics for division of the work of this committee into two committees, one of which will serve as a committee on maternal welfare and the other as a committee on child welfare.

Dr. Clark was asked to assist Dr. Ross in preparing a program wherein incubators can be made available in every county in the state.

Upon a motion by Dr. Brown, seconded and carried, it was agreed that the committee should ask the Kansas State Board of Medical Registration and Examination to investigate abortions performed by physicians and other persons.

Adjournment followed.

A meeting of the Committee on Stormont Medical Library was held in Topeka at the State Library on December 11, 1939.

Members present were Dr. L. M. Tomlinson, Harveyville, Chairman; Dr. J. M. Mott, Lawrence; and Dr. L. L. Saylor, Topeka. Dr. John M. Porter was present as Secretary of the Society, Dr. Don Wakeman was present as a representative of the Editorial Board, and Clarence G. Munns was present as Executive Secretary of the Society.

The committee inspected the library, and Miss Louise McNeal, State Librarian, presented a report concerning the present status of the Stormont Medical Library fund, the publications and books presently being added to the li-

brary, the housing and personnel required to care for the library, and the use of the library.

Dr. Wakeman reported that during the past several years the Editorial Board has loaned the review books which the Journal receives to the Stormont Medical Library, and that it has loaned the Journal exchange periodicals to the Library of the University of Kansas School of Medicine. Dr. Wakeman also reported that the Editorial Board feels greater assistance would be afforded to the Kansas profession if the periodicals as well as the books are contributed to the Stormont Medical Library, and that it has thus decided to offer both for that purpose if the Committee on Stormont Medical Library desires to have them. Clarence C. Munns reported that the Committee on Medical Schools recently adopted an opposite recommendation wherein it was suggested that no further contributions be made by the Journal to the Stormont Medical Library, and that instead all Journal books and periodicals should be forwarded to the Library of the University of Kansas School of Medicine. Following a discussion of this topic it was moved by Dr. Mott, seconded and carried, that the Stormont Medical Library Committee will accept the loan of the periodicals and books offered by the Editorial Board, and that if this change in procedure will inconvenience the University of Kansas School of Medicine the committee will authorize a loan of the periodicals for a period to be agreed upon not exceeding one year to enable the Kansas University School of Medicine to make other arrangements for periodical purchases.

The committee instructed the central office to report this recommendation to the Council, and to request a hearing on behalf of the Committee if the Council desires to inquire into the action taken. If the recommendation is approved by the Council the central office was asked to communicate with Dean H. R. Wahl of the University of Kansas School of Medicine in regard to the change in procedure of the handling of the Journal periodicals.

The suggestion was made to the Editorial Board that all Journal books and periodicals placed in the Stormont Medical Library should bear the following designation "Loaned to the Stormont Medical Library by the Kansas Medical Society."

The central office was also asked to discuss with Dr. F. P. Helm, Secretary of the Kansas State Board of Health the possibility of obtaining Kansas State Board of Health funds for improvement and extension of the facilities of the Stormont Medical Library.

Adjournment followed.

A meeting of the Endowment Committee was held in Topeka on December 11, 1939.

The meeting was called to order at 4:15 p.m. Present throughout the meeting: Dr. P. A. Pettit and Dr. H. L. Chambers and Dean Olin Templin, Secretary-Manager of the Endowment Association of K.U. Present part of the time: Executive Secretary Munns, Constitutional Secretary Porter, President-elect Loveland, and others. The office furnished a stenographer. Dr. Boggs came late and approved all that had been done.

After some general discussion covering the field, we are supposed to cultivate, especial consideration was concentrated on the matter of the Robinson bequest to the University of Kansas and the following was passed:

"Moved and approved unanimously that we ask Dean Templin to write up a suitable description of the Robinson bequest situation for presenting to the executive committee of the Kansas Medical Society, looking

finally to an attempt to sell the Robinson estate and use the money for a Medical Sciences Building in Kansas University at Lawrence."

The idea developed is to have the matter put in shape and referred to the Executive Committee for reference, in turn, to the Attorney General asking him for a ruling permitting the action indicated above.

Considerable time was spent in considering the possibilities of the hospital situation at Hardtner, where there is some lack of agreement on the matter of carrying out the terms of a will involving the building of a hospital. The possibility of a hospital for cancer research or for the medical care of inoperable cases of cancer was talked over. Eventually this action was taken.

"It is the judgment of this committee that we and the Kansas Medical Society should give our active support to the Endowment Association of K.U. in its attempt to conserve the use of the Hardtner Hospital fund in case it is found impractical to carry out the exact terms of the will involved."

Adjourned on motion.

EXHIBITS

The following reservations, in addition to those published in the last issue of the Journal, have been made for technical exhibits at the 1940 annual session of the Society which will be held at Wichita on May 13, 14, 15, 16:

American Optical Company, Southbridge, Massachusetts.
Becton, Dickson & Company, Rutherford, New Jersey.
De Puy Mfg. Company, Warsaw, Indiana.
Harrower Laboratory, Inc., Glendale, California.
Sharp & Dohme, Philadelphia, Pennsylvania.
Westinghouse X-Ray Company, Inc., Long Island, N. Y.

MEMBERS

Dr. H. M. Benning of Waverly has moved to Allegan, Michigan, where he will practice.

Dr. John N. Blank formerly of Buhler has moved to Burrton.

Dr. A. P. Brown formerly of Osborne has moved to Salina where he will be associated with the Salina Clinic.

Dr. Virgil Brown formerly of Baldwin is now located in Sabetha.

Dr. A. W. Butcher formerly of Salina has moved to Wakefield.

Dr. A. J. Anderson of Lawrence, was recently re-elected chief of staff of the Lawrence Memorial Hospital at a meeting held on December 12th. Other officers re-elected were: Dr. H. T. Jones as assistant chief of staff and Dr. H. P. Jones as secretary.

Dr. F. C. Obert formerly of Lebanon moved to Red Cloud, Nebraska, on December 1st.

Dr. N. C. Nash of Wichita attended the meeting of the Radiological Society of North America which was held at Atlanta, Georgia, on December 11-15.

Dr. George E. Scheer formerly of Haviland has moved to Pilot Grove, Missouri.

Dr. J. M. Sutton of Lincoln has announced that he will retire from active practice.

Dr. Robert A. Youngman of Harveyville has taken over the practice of Dr. O. F. Lang of Fall City, Nebraska.

Kansas physicians who were speakers at the meeting of the Kansas City Society of Ophthalmology, Otolaryngology and Rhinology, held in Kansas City, on December 7-8 are as follows: Dr. R. E. Cheney of Salina, "Some Degenerative Effects of Metals on Ocular Tissue"; Dr. Boyd L. Greever of Hutchinson, "Report of an Eye Case"; Dr. R. Ellis Starr of Concordia, spoke on "A Few Observations"; and Dr. LaVerne B. Spake of Kansas City, spoke on "Anatomical Background of Nasal Hemorrhage."

The following program was presented at a meeting held at the Smith Clinic in Pittsburg on December 12th: "The Cause and Treatment of Obesity," Dr. Edward H. Hashinger of Kansas City, Missouri; "Backache," Dr. Frederick A. Jostes of St. Louis, Missouri; Dr. Jostes also spoke on "The Treatment of Compound Injuries of Bones and Joints"; Dr. L. R. Haas of Pittsburg spoke on "Vertigo and Equilibrium."

The article "Why People Go to Cultists," by Dr. Robert P. Knight of Topeka, which was presented at the 80th annual session on May 5, and was published in the July Journal is reprinted by permission of the author and the Editorial Board of the Journal in the January, 1940, issue of the Journal of The Indiana State Medical Association.

Dr. J. D. Pettet formerly of Arcadia is now camp physician at Lake Itasca, Minnesota.

Dr. F. Normer Andrews of Bluefield, West Virginia, and Dr. August G. Hofferkamp of Crown Point, Indiana, have been added to the staff of the State Sanatorium for Tuberculosis at Norton.

COUNTY SOCIETIES

The Butler-Greenwood County Medical Society met on December 8th at ElDorado. The speaker was Dr. L. A. Smith of Chicago, a representative of the Lederle Laboratories, who presented a talk on "The Treatment of Pneumonia and Scarlet Fever." The following officers were elected for the coming year: Dr. Floyd Dillenbeck of El Dorado, President; Dr. Bertram Johnson of Eureka, Vice-President; and Dr. W. E. Janes of Eureka, Secretary-Treasurer; Dr. C. D. Baird of Eureka, Delegate, and Dr. R. W. Moore of Eureka, Alternate Delegate.

The Douglas County Medical Society elected the following officers at its December meeting: President, Dr. C. B. Johnson of Eudora; Vice-President, Dr. R. H. Edmiston of Lawrence; Treasurer, Dr. E. M. Owen of Lawrence; Dr. J. M. Mott of Lawrence, Secretary; Delegates, Dr. L. S. Powell and Dr. H. L. Chambers of Lawrence; Censor, Dr. V. M. Auchard of Lawrence.

The Barton County Medical Society held an election of officers on December 8th at Great Bend. Dr. L. R. McGill of Hoisington was elected President, Dr. T. J. Brown of Hoisington was elected Vice-President, and Dr. L. L. Wenke of Great Bend, was elected Secretary-Treasurer.

The Bourbon County Medical Society held a meeting on December 18th in Fort Scott. Dr. C. C. Conover of Kansas City, Missouri, spoke on "The Nervous Patient in Whom No Disease Is Manifested." The following officers were elected for 1940: Dr. J. J. Cavanaugh of Fort Scott,

President; Dr. J. R. Pritchard of Fort Scott, Vice-President; Dr. L. E. Ketner, Secretary-Treasurer; Dr. W. T. Wilkening, Delegate; Dr. R. Y. Strohm, Alternate Delegate; Dr. J. R. Newman, Dr. J. R. Pritchard, and Dr. R. Y. Strohm, as members of the Board of Censors.

The Geary County Medical Society held a meeting in December at Junction City. The past year's officers of the society were re-elected for the coming year. Following the meeting a dinner was served by the City Hospital Board.

The Golden-Belt Medical Society met on January 4th at Salina. Dr. E. S. Anderson of Clay Center spoke on "A Case of Asthma Treated with Sulfapyridine." Dr. Henry Turner of Oklahoma City, Oklahoma, spoke on "Endocrinology in General Practice." Dr. Wade Hampton Miller, Director of Medical Research Civil Aeronautical Authority, spoke on "Aviation Medicine," and Dr. Robert Peckham, of the Dartmouth Eye Institute spoke on "Aniseikonia." Dr. A. E. Hertzler of Halstead was the guest speaker following the dinner.

The Harvey County Medical Society held an election of officers at its meeting on December 4th in Newton. Dr. E. M. Harms of Newton was elected President, Dr. F. W. Koons of Halstead was elected Vice-President, and Dr. J. A. Grove of Newton was re-elected Secretary-Treasurer. Dr. George Westfall of Halstead spoke on "Carcinoma of the Head of the Pancreas." Dr. J. L. Grove, of Newton, presented pictures of an Alaskan trip.

The Johnson County Medical Society met in Olathe on December 4th. Dr. Carl H. Brust of Kansas City, Missouri, spoke on "Treatment of Fractures" and Dr. Guy E. Owens, of Kansas City, Missouri, spoke on "Ano Rectal Disease."

The Lyon County Medical Society held a meeting on December 5th at Emporia. Dr. F. M. Shonkwiler of Emporia spoke on "Injection Treatment of Hernia," and Dr. H. W. Manning of Emporia spoke on "Influence of Heredity on Malignant Disease." The following officers were elected: President, Dr. C. C. Underwood of Emporia; Vice-President, Dr. W. C. Fairbrother of Madison; Secretary, Dr. C. H. Munger of Emporia.

The McPherson County Medical Society held a recent meeting in McPherson at which the following officers were elected: Dr. Guy Finkle of McPherson, President; Dr. W. G. Holwerda of Lindsborg as Vice-President, and Dr. A. M. Lohrentz of McPherson as Secretary-Treasurer, and Dr. Letter Lewis as Delegate.

The Miami County Medical Society held an election of officers on December 13th at Paola. Dr. O. C. Lowe of Paola was elected President; Dr. William Brown of Paola was elected Secretary-Treasurer. Guest speakers for the meeting were Dr. Damon Walthall and Dr. A. M. Zigler both of Kansas City, Missouri.

The Montgomery County Medical Society held a meeting on December 15th at Coffeyville. Dr. A. Boese of Coffeyville was elected President of the Society for the coming year and Dr. John T. Swanson of Independence was elected as Vice-President; and Dr. H. O. Bullock of Independence was re-elected Secretary-Treasurer.

The Northwest Kansas Medical Society held a meeting at Colby on December 12th. Speakers were: Dr. Lee Leger of Kansas City, who spoke on "Treatment of Pneumonia" and Dr. Herbert J. Rinkel of Kansas City, Missouri, who

Now Available

SOBISMINOL MASS *and* SOBISMINOL SOLUTION SQUIBB

Council Accepted



An effective spirocheticide for oral and for intramuscular use

Sobisminol Mass and Sobisminol Solution have been subjected to extensive pharmacologic and clinical study. The results of the studies indicate that these preparations are promptly and quite uniformly absorbed, usually well tolerated, and have a wide margin of safety. The bismuth therein is excreted at such rates and in such quantities as to indicate that there is little accumulation of the metal while the quantities retained are adequate for a sustained systemic antisyphilitic effect.

Sobisminol Mass, given orally, has been shown to have an antisiphilitic effect comparable to that produced by Sobisminol Solution and other soluble compounds of bismuth injected intramuscularly. The preparation has been administered orally daily for periods of many months without producing evidence of cumulative toxic effects. It can be used wherever bismuth therapy is indicated in the treatment of syphilis, including its use with one of the arsenicals or in alternate courses with arsenicals according to the preference of the clinician.

Sobisminol preparations contain a complex organic bismuth compound resulting from the interaction of sodium bismuthate, tri-isopropanolamine and propylene glycol. Supplied in appropriate dosage forms for oral and intramuscular use in the treatment of syphilis.

CAPSULES SOBISMINOL MASS SQUIBB for oral use contain 0.75 Gm. Sobisminol Mass and represent 150 mg. bismuth equivalent. In bottles of 100 and 1000 capsules. Aver. adult dose, 2 capsules, t. i. d.

SOBISMINOL SOLUTION SQUIBB for intramuscular use—each cc. represents 20 mg. of bismuth. In 1-cc. size ampuls—boxes of 12. In 2-cc. size ampuls in boxes of 12 and 100—50-cc. bottles. Aver. adult dose, 2 cc. twice weekly.

*For literature address the Professional Service
Department, 745 Fifth Ave., New York, N. Y.*

E. R. SQUIBB & SONS, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

spoke on "Allergy." The following election of officers was held: President, Dr. J. L. Jensen of Colby; First Vice-President, Dr. M. J. Renner of Goodland; Second Vice-President, Dr. H. S. Bennie of Alma; Secretary-Treasurer, Dr. George Marshall of Colby.

The Republic County Medical Society in conjunction with the Kansas Crippled Children Commission conducted a crippled children's clinic in Belleville on December 8th. Dr. M. E. Pusitz of Topeka assisted the local physicians in the clinic.

The Russell Physicians Club met on December 4th at Russell. New officers elected for the coming year are: Dr. G. H. Penwell, President; Dr. F. N. White, Vice-President; Dr. B. J. Weigel of Gorham, Secretary. A scientific program consisting of movies on "Eclampsia" was presented.

The Shawnee County Medical Society held a meeting in Topeka on December 11th. The following new officers were installed: As President, Dr. Wilson K. Hobart of Topeka; as President-Elect, Dr. L. R. Pyle of Topeka; Dr. F. C. Taggart of Topeka as Secretary; Dr. Guy A. Finney of Topeka as Treasurer; and Dr. Harold Powers of Topeka as a member of the Board of Censors.

The Stafford County Medical Society held a meeting on December 12th in St. Johns. At an election of officers for 1940, Dr. C. S. Adams of St. Johns was elected President; Dr. C. H. Johnson of Stafford was elected Vice-President; and Dr. L. G. Graves was elected Secretary-Treasurer.

The Wyandotte County Medical Society met in Kansas City on December 19th. Dr. T. G. Orr and Dr. Galen Tice of Kansas City, presented a symposium on "Carcinoma of the Breast."

The Southeastern Kansas Medical Society held a meeting in Neodesha on December 11th. Speakers for the meeting were: Dr. D. V. Conwell of Halstead who spoke on "Insulin Treatment of Psychoses"; Dr. L. O. Peckenschneider of Halstead who spoke on "Pulmonary Tuberculosis"; and Mr. W. H. Edmundson of Fredonia, who discussed "Legal Phases of Medical Problems." The society will hold its next meeting in Chanute during March.

DEATH NOTICES

Dr. Ralph O. Crume, 56 years of age, died at his home in Fort Scott, December 9th of coronary thrombosis. Dr. Crume was graduated from the University College of Medicine of Kansas City, Missouri, in 1910. He was born in Galena, Missouri, on January 20th, 1883. He came to Fort Scott from Richmond, Missouri, in 1922. He was a member of the Bourbon County Medical Society.

Dr. Henry Herman Olsen, forty-eight years of age, died December 8th in Wichita, of heart disease. He was born at Willis, August 17th, 1891, and was graduated from the University of Kansas School of Medicine in 1917, at which time he enlisted in the army and was stationed at Boston. He moved to Wichita at the close of the war. He was a member of the Sedgwick County Medical Society.

Dr. Grant Meyer, seventy-two years of age, died December 22nd, at his home in Marion, of cerebral hemorrhage. He was graduated in 1898 from the Central Medical Col-

lege of St. Joseph, Missouri. Dr. Meyer was a member of the Marion County Medical Society.

Dr. Minda A. McLintock, eighty-four years of age, died January 5 at her home in Atchison. Dr. McLintock, who was the oldest woman physician in the state and the first woman practitioner of medicine in Kansas, was born in 1856, and was graduated from the College of Physicians and Surgeons in Keokuk, Iowa, in 1888. She was an honorary member of the Atchison County Medical Society.

ANNOUNCEMENTS

American Board of Obstetrics and Gynecology Examination: The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting in Atlantic City, New Jersey, on June 8, 9, 10, and 11, 1940, immediately prior to the annual meeting of the American Medical Association in New York City.

Application for admission to Group A, Part II, examinations must be on file in the Secretary's Office not later than March 15, 1940. Formal notice of the time and place of these examinations will be sent each candidate several weeks in advance of the examination dates. Group A, Part II, candidates will be examined on June 8 and 9, and Group B, Part II, on June 10 and 11, 1940.

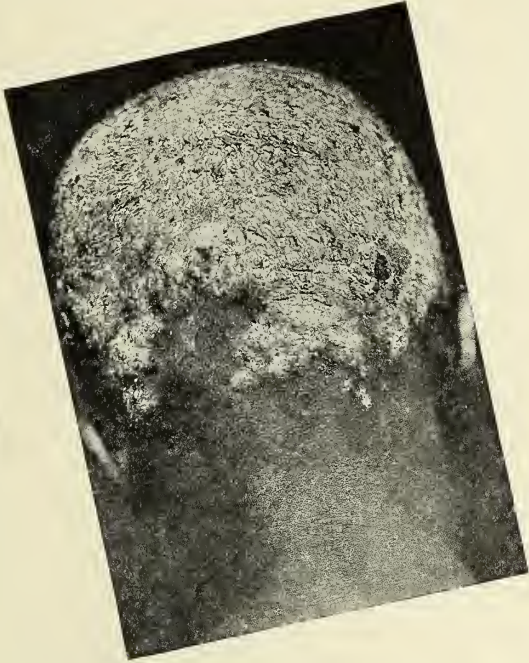
The annual dinner of the Board will be held in New York City on Wednesday evening, June 12, 1940, at the Hotel McAlpin. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, (6) Pa.

American College of Surgeons will hold a Southern Sectional Meeting in New Orleans, January 17-19. All members of the State Medical Society are welcome to attend. The following states will participate: Louisiana, Mississippi, Alabama, Georgia, Florida, Tennessee, Kentucky, Missouri, Arkansas, Texas, Oklahoma, and Kansas. A series of Group Clinical Conferences will be held on the following subjects: Orthopedics, thoracic surgery, obstetrics and gynecology, urology, neurological surgery, ophthalmology, otolaryngology, and a cancer clinic. In addition to the clinical demonstrations and conferences, scientific sessions, panel discussions will be held. Among the subjects to be discussed are cancer, fractures, thyroid surgery, varicose veins, intestinal obstruction, craniocerebral injuries, sinusitis, stomach surgery, prevention of post-operative pulmonary complications, and many more limited topics.

The Eighth American Scientific Congress will be held in Washington, D. C., May 10-18, 1940 in connection with the celebration of the fiftieth anniversary of the founding of the Pan American Union, according to Warren Kelchner, Acting Chief of the International Conference. This series of inter-American meetings will serve as a medium for the exchange of scientific information of interest to the people of the Americas.

Tuberculosis—Early discovery means early recovery.

An Illustration for Almost Every Page of Text in



DISEASES of the SKIN

by RICHARD L. SUTTON, Professor of Dermatology, University of Kansas, School of Medicine; and RICHARD L. SUTTON, Jr., Associate in Dermatology, University of Kansas, School of Medicine. 1549 Pages. 1452 ILLUSTRATIONS. 21 Color Plates.

PRICE, \$15.00

An illustration is worth 10,000 words in diagnosis and treatment of skin diseases. "DISEASES of the SKIN" brings you the IDEAL combination, illustrations and a splendid text. This valuable book contains 1452 ILLUSTRATIONS and 1549 PAGES, approximately one illustration to every page of text.

Other Important MOSBY Books

CLINICAL LABORATORY METHODS and DIAGNOSIS by R.B.H. GRADWOHL. Second edition, 1607 pages, 492 illustrations, 44 full color plates. PRICE \$12.50.

EXPERIMENTAL PHARMACOLOGY and MATERIA MEDICA by DENNIS E. JACKSON. 906 pages, 892 illustrations, 55 color plates. PRICE, \$10.00.

FRACTURES, DISLOCATIONS, and SPRAINS by JOHN ALBERT KEY and H. EARLE CONWELL. Second edition, 1246 pages, 1224 illustrations. PRICE, \$12.50.

LIFE AND LETTERS OF DR. WILLIAM BEAUMONT by JESSE S. MYER. With Introduction by SIR WILLIAM OSLER. 327 pages, 60 illustrations. PRICE, \$5.00.

VARICOSE VEINS by ALTON OCHSNER and HOWARD R. MAHORN. 147 pages, 50 illustrations, 2 color plates. PRICE, \$3.00.

Few branches of medicine have seen such progress in the past four years as has dermatology. Without losing recognition of the field of dermatology as a specialty, the authors of "DISEASES of the SKIN" believe that the time has come to tie description and concepts of disorders of the skin with general medicine and biology. The viewpoint is taken that the skin can be the mirror of, or the periscope to internal disorders. In connection with this new point of view, Sutton and Sutton illustrate diseases of the skin, interpret the illustrations and suggest methods of treatment.

THE C. V. MOSBY COMPANY
3525 Pine Blvd.
St. Louis, Mo.

KMJ 1-40

Gentlemen: Send me Sutton "Diseases of the Skin,"
priced at \$15.00, and.....

.....
charging my account.

Dr.

Address.....

BOOK REVIEWS

A MANUAL OF FRACTURES AND DISLOCATIONS—Barbara Bartlett Stimson, M.D. Published by Lea & Febiger, Philadelphia, Pennsylvania, 1939. Price \$2.75.

This book is a very concise, easily understandable hand book, illustrated by drawings of the essential principles in the diagnosis and treatment of fractures and dislocations. It contains more material than many of the more exhaustive treatises and can be unqualifiedly recommended to the general practitioner as a safe guide in the treatment of fractures and dislocations.—C. B. T.

CLINICAL GASTROENTEROLOGY—Horace Wendell Soper, M.D. Published by the C. V. Mosby Company, St. Louis, Missouri, 1939.

This book is a rare treat. The profession owes a debt of gratitude to the author and published for this work which represents a brief and simple presentation of the methods of practice by a gastroenterologist of many years experience. He "attempts to clarify a subject which has become entirely too complex." Diagnosis and treatment are considered on a physiologic basis but empiric methods are retained where necessary.

There is no formal discussion of history taking. Diagnostic methods with reproductions of the authors laboratory forms are given. Diseases of the digestive tract from stomatitis to pruritis ani are discussed. There are also chapters on indicanuria, procto-sigmoid-ostomy, the enema, diathermy of the rectum and colon, the liver and gallbladder, pancreas, obesity, and allergy. Each chapter is only about three to eight pages in length and followed by beautiful illustrations. The case against milk is very illuminating and offers food for thought. Various types of special diet are included in a very usable form.

Anyone treating gastrointestinal complaints, and they comprise more than half of our patients, will profit by this excellent book.—D. C. W.

DISEASES OF THE NOSE AND THROAT—Charles J. Imperatori, M.D., and Herman J. Burman, M.D. Published by J. B. Lippincott Company, Philadelphia, 1939. Second Edition Revised.

The book was written to answer the questions of the general practitioner and senior medical student, which are: What is the diagnosis and how shall it be treated? It is essentially the course given students in the New York Post Graduate School of Columbia University.

It is in outline form which makes its use as a reference book easier. Pathology is allotted considerable space and many photographs of microscopic sections are included.

It can be recommended as a handy book for the general practitioner to have in his library.—H. L. K.

LIGHT THERAPY—Frank Hammond Krusen, M.D. Published by Paul B. Hober, Inc., Harper & Brothers, New York. Price \$3.50.

This is the second edition of a book written by a well versed author (Associate Professor of Physical Medicine Mayo Foundation University of Minnesota). It is a rather small book, intended evidently as a handy reference book for the general practitioner. The section on the physics of light is very elementary, and contains no higher mathematics, but does give the wave lengths which will activate ergosterol; those which are bactericidal, and will inhibit Vitamin D formation; also stating the penetration and correlating the general field of wave lengths from radio waves to cosmic waves. He gives a complete survey of all the

artificial light producing machines made. He states their output of wave lengths. He discusses various filters and substances taken internally to enhance the action of light.

His chapter on physiology is rather complete, giving blood, cellular and chemical changes, as well as those of skin, bone and other tissues involved.

Needless to say, he discusses various standard techniques of administration and dosages.

He gives a summary of all diseases for which light therapy has been advocated, and lists those which are recognized by the American Medical Association, Council of Physical Therapy.—B. M. M.

MEDICINE IN MODERN SOCIETY—David Riesman, M.D. Published by the Princeton University Press, 1938. Price \$2.50.

Dr. Riesman, like Osler, is representative of the great medical teachers this country has produced and who have helped make our medical training centers the envy of the rest of the world. He is professor of medical history and professor emeritus of clinical medicine at the University of Pennsylvania and has practiced medicine for forty-five years. This volume was developed from a series of Vanuxen Lectures delivered by the author at Princeton University.

The author believes that "the history of medicine is in reality an epitome of the history of civilization." He traces medical history through what he considers its peak or the discoveries which have most benefited mankind. The relation of the present-day profession to the modern and changing social order is discussed with some suggestions for a more equitable distribution of medical care. It is a very scholarly and tolerant discussion of interest to both physician and lay readers.—D. C. W.

WHAT IT MEANS TO BE A DOCTOR—Dwight Anderson. Published by the Public Relations Bureau, Medical Society of the State of New York, 1939. Price \$1.00.

It is a small easily read book conveying an impression of a doctor's life, character, education, and ability. It is a book that should be accessible to the general public that it might better understand the fallacies of socialized medicine and have a better understanding of the medical profession. The book if read will materially aid in establishing better relationships between the doctor and the public.—C. B. T.

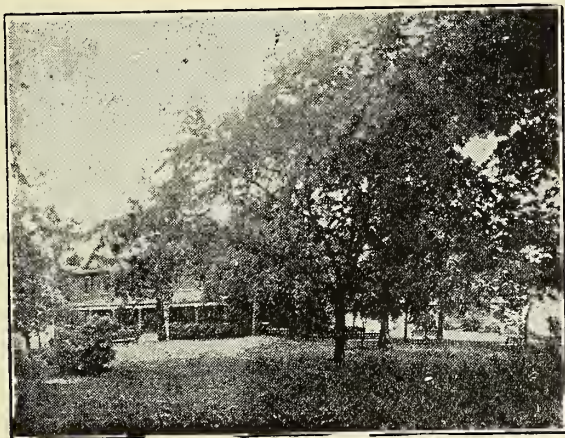
THE HEART IN PREGNANCY—Julius Jensen. Published by the C. V. Mosby Company, St. Louis, Missouri, 1938.

There is no situation in the practice of medicine which presents more difficult problems than those confronted in the pregnant female who has heart disease. The dogmatic statements of the great and near great men of the past have been accepted and handed down to us as facts. These were usually based on the principle that specific valvular lesions indicated a specific course to follow. The modern dynamic concept of disorders of the circulation has resulted in the functional classification of heart disease in obstetrics as well as in the non-pregnant.

Dr. Jensen has gathered original material and reviewed the world literature to produce this book and the result is a very valuable contribution to medicine. Part I considers the effect of pregnancy on the normal heart. Part II discusses organic heart disease and pregnancy. The section on rheumatic heart disease is an exhaustive study of a difficult subject. A more cheerful prognosis, less necessary for therapeutic abortion, and a more tolerant attitude toward marriage and child bearing in cardiac women are the principle conclusions. Carefully compiled statistical studies are given.

Grandview Sanitarium

KANSAS CITY, KANSAS, (26th St. and Ridge Ave.)



A High Grade Sanitarium and Hospital of super accommodations for the care of:

NERVOUS DISEASES
MILD PSYCHOSES
THE DRUG HABIT
AND INEBRIETY.

Situated on a 20-acre tract adjoining City Park of 100 acres. Room with private bath can be provided.

The City Park line of the Metropolitan Railway passes within one block of the Sanitarium. Management strictly ethical.

Telephone: Drexel 0019

SEND FOR BOOKLET

E. F. DeVILBISS, M.D., SUPT.

OFFICE, 1124 PROFESSIONAL BLDG., KANSAS CITY, MO.

SILVER PICRATE *Wyeth's*

has shown a

**CONVINCING RECORD OF EFFECTIVENESS
in ACUTE ANTERIOR URETHRITIS
due to *Neisseria gonorrhoeae***

The record is based on rigid clinical and laboratory signs before and after treatment.*

- | | |
|-----------------------------|------------------------------|
| 1. Fresh smear | 3. Acid formation in maltose |
| 2. Fermentation of dextrose | 4. Agglutination test |
| 5. Alkali solubility test | |

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in Anterior Urethritis: Wyeth's Silver Picrate Crystals used in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genito-urinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH AND BROTHER, INC. • PHILADELPHIA, PA.

Obstetrical delivery and choice of anesthesia are considered. The less frequent nonrheumatic heart diseases are included.

This book has much to offer everyone dealing with either heart disease or obstetrics. It is one of those unusual volumes which has an answer to nearly every problem one meets in every day practice in this field.—D. C. W.

HEART PATIENTS—C. Calvin Smith, M.D. Published by Lea & Febiger, Philadelphia, Pennsylvania, 1939. Price \$2.00.

This is a small book of 161 pages, written for the general practitioner by an author with an evident literary trend of mind. It is easy and pleasurable reading, dealing with presenting symptoms and physical signs, with clever methods of deducting diagnoses therefrom. It sketches the laboratory aids necessary to make final diagnoses.

The chapter on the management of coronary patients is good. There is a minimum on the heart in pregnancy—a subject so popular nowadays. The book contains no microscopic pathology, very little macroscopic pathology, and no abstract research. The author seems primarily interested in the practical side, and evidently intends the book as a handy reference manual for the busy physician, who wishes to keep up on the modern trend of ideas in heart disease. All statements, with a few exceptions, are well accepted.—B. M. M.

HANDBOOK OF ORTHOPAEDIC SURGERY—Alfred Rives Shands, Jr., M.D., Associate Professor of Surgery in Charge of Orthopaedic Surgery, Duke University School of Medicine, Durham, North Carolina. Published by The C. V. Mosby Company, St. Louis. Price \$5.00, p.p. 593.

This is a very practical handbook which should be of extreme value to general physicians and surgeons, as well as to students and nurses. It is very excellently and clearly written, and describes concisely, and yet fairly completely, the various aspects of each condition as it is taken up.

In the first chapter, there is a brief general discussion of bone and joint pathology, and of joint movements and deformities. Congenital conditions are then presented. In affections of bone, the author differentiates between conditions seen in early life and those which are prone to occur in adult life.

A very excellent description is presented of infections of bones and joints. This is then followed with several chapters on tuberculosis of bones and joints. The author writes concisely but well on chronic arthritis, neuromuscular disabilities, tumors, and fracture deformities. Body mechanics and physical therapy proceed a consideration of affections of the spine and thorax and the low back.

Later chapters consider conditions involving the hip, knee, ankle, foot, neck, shoulder, elbow, wrist, hand, and jaw.

The final portion of the book is devoted to a very excellent bibliography, not only of the textbooks which have been consulted, but also of the various articles and monographs which have a bearing in the description of each chapter which has been presented.

It is a well written, authenticated short review of the field of orthopaedic surgery, not from the viewpoint of one authority, but many. It is so arranged as to represent a well-balanced system of undergraduate study for the medical school curriculum.—M. E. P.

FUNCTIONAL DISORDERS OF THE FOOT—Frank D. Dickson, M.D., and Rex L. Diveley, M.D. Published by J. B. Lippincott Company, Philadelphia. Price \$5.00, pp. 305.

This is an excellent and clearly written text for those

who desire a very practical discussion of the functional disorders of the foot. The authors consider the evolutionary development of the human foot very briefly and then pass on to anatomy and physiology, prior to taking up the primary causes of foot imbalance. The authors are to be commended on the excellent approach in the examination of the foot. They take up disturbances of the foot in childhood, in adolescence, and in adult life, and give very practical instructions as to their management. Foot apparel is considered, but much too briefly. The various conditions affecting the big toe are presented in a practical manner. Affections of the nails and the skin of the foot are briefly reviewed, and the treatment given. In a similar manner, the tarsal, metatarsal, and heel regions are discussed. Only the more effective operative procedures are outlined. They close with a description of foot strapping and foot exercises.

The great value of the book is probably the method of approach in the examination of the foot. It is a clear-cut and practical description of common everyday problems in this field, and will do much to prevent these cases from falling into the hands of the unqualified.—M. E. P.

MIDWINTER CLINICAL PROGRAM

The Midwinter Clinics sponsored by The Colorado State Medical Society will be held in Denver, February 7, 8, and 9, with headquarters at the Shirley-Savoy Hotel. Attendance is expected to exceed all previous sessions.

Guest speakers who have accepted are: Cyrus W. Sturgis of Ann Arbor, Professor of Internal Medicine at the University of Michigan; Michael L. Mason, M.D., of Chicago, Associate Professor of Surgery at Northwestern; Alfred I. Folsom, M.D., of Dallas, Professor of Urology at Baylor; Lowell S. Groin, Los Angeles Radiologist; and Joseph Brennemann, M.D., Director of Children's Memorial Hospital of Chicago and Professor of Pediatrics at the University of Chicago. Guest speakers will also appear on the subjects of obstetrics, orthopedics, and military subjects.

The three morning clinical programs will be conducted at the Denver's Children's, the Colorado General, and the Denver General Hospitals, with afternoon programs purely clinical and conducted by the staffs of Mercy, Saint Anthony's and Presbyterian Hospitals.

FEDERAL INCOME TAX

The following information in regard to the Federal Income Tax is of interest to Physicians:

FILING YOUR INCOME TAX RETURNS FOR 1939.

1. Study carefully the instructions on the form.
2. Assemble data for filing the returns early.
3. Keep memorandums after the return is prepared.
4. Give full explanation so that an intelligent audit can be made. March 15, 1940 is the last filing date and to avoid the congestion in the collector's office file your return early. If in doubt call the Internal Revenue Office in the Post Office Building, Room 300, Wichita. Some of the branch offices throughout Kansas are as follows: Topeka, Room 200, Federal Building; Kansas City; Hutchinson; Salina; Pittsburg; Winfield; and Dodge City. Secure aid from these offices on points about which you are in doubt for compiling accurate income tax returns.

WHO MUST FILE RETURNS? The following individuals must make returns under oath stating specifically the items of gross income and deductions and credits allowable:

- (1) Every individual having a net income for the taxable year of \$1,000 or over, if single, or if married and not

WHEN A HEAD COLD BEGINS

Case No. 1 (C. S.) Male, white, age 25. Acute head cold. After a few inhalations from 'Benzedrine Inhaler' the turbinates were shrunk to normal within seven minutes.

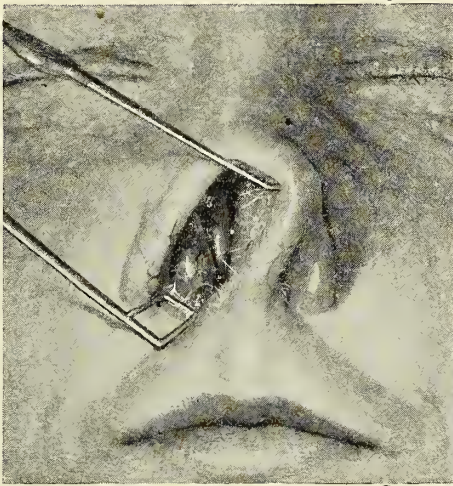


Fig. 1—Time 2:15 P.M.
Before treatment.



Each tube is packed with amphetamine, S. K. F., 325 mg.; oil of lavender, 97 mg.; menthal, 32 mg. 'Benzedrine' is S. K. F.'s trade mark, Reg. U.S. Pat. Off.

'Benzedrine Inhaler' is particularly valuable when used at the onset of a head cold—at the very first sneeze. By relieving congestion, it improves respiratory ventilation and assists in maintaining drainage of the nasal accessory sinuses.

The early use of 'Benzedrine Inhaler' is especially indicated for your patients who catch cold easily.

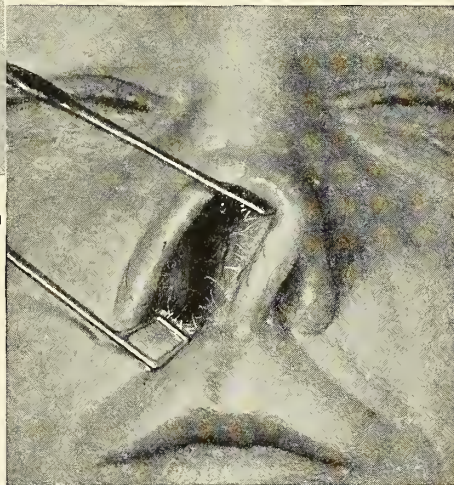


Fig. 2—Time 2:22 P. M.
After using 'Benzedrine Inhaler'.



BENZEDRINE INHALER

A Volatile Vasoconstrictor

SMITH, KLINE & FRENCH LABORATORIES, PHILADELPHIA, PA.

EST.  1841

- living with husband or wife;
- (2) Every individual having a net income for the taxable year of \$2,500 or over, if married and living with husband or wife;
 - (3) Every individual having a gross income for the taxable year of \$5,000 or over, regardless of the amount of his net income.

If a husband and wife living together have an aggregate net income for the taxable year of \$2,500 or over, or an aggregate gross income for such year of \$5,000 or over, each shall make a return, or the income of each shall be included in a single joint return, in which case the tax shall be computed on the aggregate income. The exemptions are \$1,000 for single persons and \$2,500 for married persons living together. Also, a taxpayer is allowed a credit of \$400 for each person dependent upon him or her for chief support, if such person is under eighteen years of age or incapable of self-support because mentally or physically defective.

DEDUCTIONS FOR PROFESSIONAL EXPENSES: A professional man may deduct all necessary expenses incurred in the pursuit of his profession. These include the cost of supplies used in his practice, office rent, cost of light, water, fuel, and telephone in his office, the hire of office assistants, and expenses paid in the operation and repair of an automobile, based upon the proportion of time it is used in making professional calls or for other professional purposes.

Many physicians use their residences both as their offices and their homes. In such instance the physician may deduct as a business expense the rental value of the rooms occupied for office purposes if he actually pays rent, and also the light and heat furnished these rooms. Also, he may deduct a portion of the wages paid domestic servants whose time is partly occupied in caring for these rooms. Membership dues in professional societies are deductible. Physicians and dentists who keep in their waiting rooms current magazines and newspapers for the benefit of their patients may deduct this item as a business expense. The cost of professional journals for the taxpayer's own use is also a deductible item.

The cost of technical books is not a deductible item, being a capital expenditure, but a proportionate amount for each year's depreciation of the books may be deducted. Depreciation may also be taken on office furniture and equipment. Insurance premiums on office or other professional equipment and liability insurance may be deducted. A premium paid for automobile liability insurance should be apportioned and that part of the premium attributable to business may be deducted as a business expense.

MATERNAL AND CHILD WELFARE

Two out of every three maternal deaths, and one out of every infant death can be prevented according to recent reports from the Federal Children's Bureau. In Kansas the preventable ratio is two out of every four maternal deaths and one out of every four infant deaths.

Physicians say that the maternal and infant death rate can be lowered by:

MOTHERS

1. Examination by a competent physician before pregnancy occurs.
2. Early prenatal care, with careful blood examination, including Wassermann.
3. Intelligent preparation, with improved home conditions for many.
4. Proper diet throughout pregnancy.

5. Better hospital equipment in many communities.
6. Better obstetric services, including postnatal care.

INFANTS

1. Proper food and feeding methods, guided by a competent physician.
2. Checking regularly, by physician, for a consistent gain in weight.
3. Good sanitary surroundings, cleanliness, fresh air, sunshine.
4. Protection against preventable diseases. (Whooping cough, diphtheria, smallpox.)
5. Avoiding contact with communicable diseases.

NEW LICENSES

The Kansas Board of Medical Registration and Examination which met in Topeka, December 12-13, 1939, announces the list of doctors of medicine who were granted licenses by examination and reciprocity in Kansas:

Jeff T. Anderson
Roy H. Blender
Eliot E. Foltz
Harold T. Gross
Jacob G. Jantz
Thomas E. Johnston
Benjamin Kovitz
Albert H. Krause
William H. Littleton
Lyman C. Murphy
Joe T. McKibben
William A. Owens
Jack F. Parsons
Earl Saxe
Norman C. Siebert
Otis D. Swan
Hugh M. Swaney
Herschel S. Smith
Carl Gustaf D. Tillman
John R. Vaughan, Jr.
Orville S. Walters
Ragnar T. Westman

The next regular meeting of the Board will be held June 18-19, 1940, at the Wyandotte High School, Kansas City, Kansas.

BOOK REVIEW

EPIDEMIC ENCEPHALITIS—There has recently been published by the Columbia University Press, New York, at a price of \$3.00, the Third Report of the Matheson Commission for the Study of Encephalitis established in 1927 through the interest and generosity of Dr. William Matheson. The First Report was issued in 1929 and the Second in 1932. The first two consisted largely of collection and correlation of data contained in the voluminous literature of encephalitis, particularly on the etiology, epidemiology and treatment. This required an enormous amount of work as each report contained a bibliography, alphabetically arranged, of all available published articles on the subject up to the date of their publication. These two reports contained a total of several thousand references. The work of the Third Report, the one covered by this review, has been carried on in a more or less similar manner as the first two, but includes more results obtained by studies made in the Commission's own clinic. Such investigations probably have been more carefully controlled and conclusions drawn from them more reliable than some reported in the literature.

Karo in High-Caloric Feeding

Infants . . .

KARO is ideal in concentrated milk mixtures because it is saturated with maltose-dextrins, easily digested, not readily fermented and does not cloy the appetite for other foods.

Children . . .

KARO provides 60 calories per tablespoon, added to foods and fluids, when the child fails to gain in weight on an adequate diet or his vitality is depleted during convalescence.

Adolescents . .

KARO is invaluable with each meal to help fulfill the enormous energy requirements of adolescence. Accessory meals may be prescribed with advantage and KARO added to foods and fluids.



CORN PRODUCTS REFINING COMPANY

*Invites inquiries from Physicians
... for further information*

17 BATTERY PLACE • NEW YORK CITY

One is at times a little uncertain from the text just what clinical entity the Commission had in mind when using the term Epidemic Encephalitis. For instance, in discussing the St. Louis type, which certainly occurred in epidemic form, the statement is made "Had it not been for the presence of an epidemic with a fairly large percentage of mild cases, it might very well have been mistaken for epidemic encephalitis." This would lead one to infer that in these reports only one specific type, probably the lethargic of von Economo, was to be understood when reference is made to Epidemic Encephalitis. All three volumes published by the Commission, however, discuss and in some instances, at considerable length, other types of encephalitis, which had appeared in epidemic form, notably those found in Australia, Japan and in St. Louis. There are also many references, culled from the large bibliographies, to cases of encephalitis not found in epidemics. It would seem therefore, that a title somewhat more comprehensive than the one used would be more applicable in future reports unless the Commission is bound and restricted by the terms of the original grant made by Dr. Matheson.

In reading the three reports serially one is impressed with the progressive tendency towards the crystallization of the theory that encephalitis, or at least the epidemic form, is a virus disease, the virus in question being identical with or very closely related to that known as the herpetic type. It is quite notable how much more this theory is stressed and how little attention is given to the bacterial idea, even that of Rosonow, in this Third Report compared with the preceding ones. The Third volume just recently published quotes many scientific investigators working with viruses as having found what would seem to be quite sufficient close relationship between encephalitis and the neurotrophic herpes virus to justify the definite conclusion that it is the etiological factor of the disease. The committee, however, does not commit itself so positively on the subject but illustrates its conservatism by the statement "The accumulated evidence certainly points to the possibility that this type of virus may be the etiological agent in certain cases." More definite conclusions are reached in this report in discussing various other types of encephalitis including post-vaccinal, hemorrhagic and infectious forms.

Equine encephalitis is discussed by the Commission for the first time in this volume. It is divided into eastern and western types, each said to be due to an individual virus, differing from the other serologically and immunologically. The virus of both the eastern and western disease is claimed to be carried by mosquitos and the following unqualified statement is made: "This is the first time that it has been proved that equine encephalitis is transmittable to man." This proof, however, appears to have been based on the occurrence of twenty-three cases, mostly in children, occurring at the same time and largely in the same area as an outbreak of the disease in horses and on a study of only six human brains. This would seem to be a rather limited investigation upon which to base so definite a conclusion, particularly in view of the well known fact that viruses are often found to be quite variable in reaction under laboratory studies.

A chapter on various allied diseases not mentioned in former reports, is included in this volume. The most important of these allied conditions is lymphocytic choriomeningitis first described by Armstrong and his co-workers. The symptoms said to be characteristic of this disease, such as prodromal illness resembling influenza, followed later by sudden onset of fever, severe headache, nausea and vomiting, marked rigidity, abnormal reflexes, and occasional facial and other paralyses, are very similar to those found in many cases considered by the ordinary practitioner as

sporadic attacks of the same form of encephalitis occurring at times in epidemics and analogous to the well-recognized sporadic cases of poliomyelitis. Distinct clinical evidence of involvement of the brain as well as the meninges, is so frequently if not always found in this so-called allied disease, also said to be of virus origin, suggests the question if it would not be better to group it merely as a form of encephalitis with meningeal complications occurring sporadically.

In this volume is included an exhaustive study of various types of encephalitis found in this and many foreign countries, from the standpoint of epidemiology, illustrated by numerous statistical tables, charts and graphs.

Concerning treatment, to which a chapter of considerable length is devoted, one is amazed at the number and variety of methods reported as having been used in the treatment of this disease, including many different drugs, dyes, induced fever, serum, vaccines, etc. The results obtained from these different remedies as reported in the literature have been quite varied and often contradictory. The Commission appears to look with more favor on the use of vaccines, especially vaccine F, made from the formalinized herpes virus. They have used this particular vaccine in their own clinic since 1933 and state, "At the present time it seems to us probable that vaccine F is of value in treating the acute form of encephalitis, including encephalitis accompanying measles, and perhaps other infections . . . This treatment, of course, depends on the theory that the neurotrophic herpetic-like virus is the cause of encephalitis, which theory is by no means generally accepted, nevertheless, the patients treated by this method give a more favorable showing than do patients in the controlled groups." It is emphasized, however, that more time and study is required to properly evaluate the various therapeutic agents recommended and now in use.

In conclusion, we would say that the Matheson Commission, which appears to be the only unit continuously and intensively studying encephalitis, is deserving of much praise for the work it is doing and the reports issued from time to time are quite worth while and in view of the very complete bibliography now comprising more than six thousand references, are of distinct value, particularly to those engaged in the study of this very important, interesting and complicated disease.

—M.L.P.

NEW BOOKS RECEIVED

TEXTBOOK OF NERVOUS DISEASES—Robert Bing, Professor of Neurology, University of Basel, Switzerland. Translated, from the Fifth German Edition. With 207 illustrations and 838 pages. Published by the C. V. Mosby Company, St. Louis, Missouri. Price \$10.00.

PHYSIOLOGY IN HEALTH AND DISEASE—Carl J. Wiggers, M.D., Third Edition, with 218 engravings, and 1144 pages. Published by Lea & Febiger, Philadelphia, Pa., 1939. Price \$9.50.

PSYCHOBIOLOGY AND PSYCHIATRY, A Textbook of Normal and Abnormal Behavior—Wendell Muncie, M.D. Containing sixty-nine illustrations and 738 pages. Published by the C. V. Mosby Company, St. Louis, Missouri, 1939. Price \$8.00.

A TOPOGRAPHIC ATLAS FOR X-RAY THERAPY—Ira I. Kaplan, M.D., and Sidney Rubinfeld, M.D. Published by the Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, Illinois, 1939.



The
W. E. ISLE COMPANY
2nd FLOOR RIEGER BLDG.—1121 GRAND AVE.
TELEPHONE VICTOR 2350
KANSAS CITY, MISSOURI

All Types Orthopaedic
Appliances Made in
Our Own Factory

PROMPT SERVICE
FULL COOPERATION

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray

WOODCROFT HOSPITAL



PUEBLO, COLORADO

Founded 1896 by Dr. Hubert Work
A modern, newly constructed
sanitarium for the scientific
care and treatment of those
nervously and mentally ill, the
senile and drug addicts.

CRUM EPLER, M.D.
Superintendent



**PAUSE...AT THE
FAMILIAR
RED
COOLER**



THE NEW INTERNATIONAL CLINICS—VOLUME I AND II, Containing Original Contributions; Clinics; and Evaluated Reviews of Current Advances in the Medical Arts, Edited by George Morris Piersol, M.D., Professor of Medicine, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania. With the Collaboration of Francis Gilman Blake, M.D., Yale University, New Haven; Russell L. Cecil, M.D., Cornell University, New York; Vernon C. David, M.D., Rush Medical College, Chicago; Nicholson Joseph Eastman, M.D., Johns Hopkins University, Baltimore; Karl Musser Houser, M.D., University of Pennsylvania Hospital, Philadelphia, Pa.; William John Kerr, M.D., University of California, San Francisco; John W. McNee, D.S.O., M.D., University of College Hospital, London; Jonathan C. Meakins, M.D., McGill University, Montreal; George Richards Minot, M.D., Harvard University, Boston; John Walker Moore, M.D., University of Louisville; John Herr Musser, M.D., Tulane University, New Orleans; Lewis J. Pollock, M.D., Northwestern University, Chicago; Isidor S. Ravdin, M.D., University of Freiburg, Germany; Borden Smith Veeder, M.D., Washington University, St. Louis; George Barclay Wallace, M.D., New York University, New York; Russell M. Wilder, M.D., Mayo Foundation, Rochester; Alan C. Woods, M.D., John Hopkins University, Baltimore. Published by J. B. Lippincott Company, Philadelphia, 1939. Volume I contains 312 pages, illustrated, and Volume II contains 321 pages, illustrated.

HEADACHE AND HEAD PAINS—A Ready Reference Manual for Physicians—By Walton Forest Dutton, M.D., Former Medical Director, Polyclinic and Medico-Chirurgical Hospitals Graduate School of Medicine, University of Pennsylvania; Visiting Physician to the Northwest Texas Hospital; Visiting Physician to the St. Anthony's Hospital; Director, Medical Research Laboratories, Amarillo, Texas. Published by F. A. Davis Company, Philadelphia, 1939. Containing 301 pages.

MEDICOLEGAL PHASES OF OCCUPATIONAL DISEASES, An Outline of Theory and Practice—By C. O. Sappington, A.B., M.D., Dr.P.H., Consultant, Occupational Diseases and Industrial Hygiene, Formerly Director of Industrial Health, National Safety Council; Lecturer on Industrial Hygiene and Occupational Diseases, University of California, Stanford Medical School, University of Michigan, University of Illinois Medical School, and Rush Medical School. Published by the Industrial Health Book Company, Chicago, 1939. Containing 405 pages, Contents include: Industrial; Insurance; Medical; and Legal Phases.

1939 YEAR BOOK OF GENERAL MEDICINE—Published by the Year Book Publishers, Inc. Departments include: Infectious Diseases, Diseases of the Chest, Diseases of the Blood and Blood Forming Organs, Diseases of the Heart and Blood Vessels, Diseases of the Digestive System and of Metabolism.

A MANUAL FOR DIABETIC PATIENTS—W. D. Sansum, M.D., Alfred E. Koehler, M.D., and Ruth Bowden, B.S. Price \$3.25. Published by the Macmillan Company, New York. Containing a history of the disease, with discussion of various diets, and treatments.

DIAGNOSTIC SIGNS, REFLEXES AND SYNDROMES—Standardized by—Wm. Egbert Robertson, M.D., and Harold F. Robertson, M.D. Published by the F. A. Davis Company, Philadelphia, 1939.

PROCTOLOGY — FOR THE GENERAL PRACTITIONER—By Frederick C. Smith, M.D., M.Sc. (Med.); F.A.P.S., Proctologist to St. Luke's and Children's Hospital, Philadelphia; formerly Associate in Proctology, Graduate School of Medicine, University of Pennsylvania. Published by the F. A. Davis Company, Philadelphia, 1939. Containing 386 pages, 142 illustrations and three color plates. Chapter titles are as follows: Anorectal Symptomatology; Rectal, Anal and Perineal Sensory Symptoms of Urogenital Origin; Embryology and Anatomy; Malformations of Anus and Rectum; Examination and Diagnosis; Preoperative and Postoperative Treatment; Anesthesia; Anal Ulcer, Cryptitis and Papillitis; Hemorrhoids; Prolapse and Procidentia; Pruritus Ani; Abscesses and Fistulae; Stenosis of Anus, Inflammatory Stricture of Rectum; Diseases of the Colon and Proctitis; Anorectal Tuberculosis; Venereal Diseases of Anus and Rectum; Pilonidal Sinus and Cyst, Dermoids and Teratomas; Parasites; Constipation, Diarrhea and Fecal Impaction; Benign and Malignant Neoplasms—Colonic Surgery; Wounds, Injuries and Rupture of the Rectum—Foreign Bodies; and Therapeutic Suggestions.

PRINCIPLES of HERMATOLOGY—By Russell L. Haden, M.A., M.D., Chief of the Medical Division of the Cleveland Clinic, Cleveland, Ohio, Formerly Professor of Experimental Medicine in the University of Kansas School of Medicine, Kansas City, Kansas. Published by Lea & Febiger, Philadelphia, 1939. With 100 illustrative cases, and 15 illustrations, and ninety-five charts and drawings. Chapter titles include: The Blood; The Hematopoietic System and Blood Formation; The Erythrocyte and the Erythropoietic System; Hemoglobin; The Leukocytes and the Leukopoietic System; The Thrombocyte (Platelet) and the Clotting of Blood; Technic of the Blood Examination; The Mechanism of Anemia and Polycythemia; The Mechanism of Leukocytosis and Leukopenia; The Mechanism of Abnormal Bleeding; Treatment of Anemia and Polycythemia; Treatment of Leukemia and Leukopenia; Treatment of Pathologic Bleeding; The Grouping of the Blood Disorders; Cases Illustrating the Classification of Anemia Based on the Method of Production; The Macrocytic Anemias; The Hypochromic and Microcytic Anemias; The Hemolytic Anemias; The Cryptic Anemias; The Pernicious Anemia; The Polycythemias; Cases Illustrating the Leukocytoses and Leukopenias; Cases Illustrating the Leukemias; Cases Illustrating the Blood Disorders in Relation to Splenomegaly; and Cases Illustrating Pathologic Hemorrhage.

EPIDERMIC ENCEPHALITIS, Etiology, Epidemiology Treatment—Third Report by the Matheson Commission. Willard C. Rappleye, Chairman; Haven Emerson; Alphonse R. Dochez; Frederick P. Gay; William H. Park; Charles R. Stockard; Frederick Tilney; Willis D. Wood; Hubert S. Howe, Secretary; Josephine B. Neal, Executive Secretary; and Helen Harrington, Epidemiologist. Published by the Columbia University Press, Morningside Heights, New York, 1939. Contents include chapters on: The Work of the Matheson Commission; Summary of Investigation on Etiology; Various Allied Diseases; Summary of the Treatment of Encephalitis; and Epidemiology. Price \$3.00 per copy.

A BASKET OF FRAGMENTS; From a Doctor's Records—Andrew Jackson May, A.M., M.D. A book of Poems Published by the Pyramid Press, New York.

POPULATION, RACE AND EUGENICS — Morris Siegel, M.D. Published by the author, 546 Barton Street East Hamilton, Ontario, Canada, 1939.

SIGNIFICANT CLINICAL RESULTS IN A SERIES OF SMOKING TESTS

FACTS FROM... *Laryngoscope, Feb. 1935*
Vol. XLV, No. 2, 149-154

(1) At the beginning of the experiment, 73.7% of the cases showed a congested condition of the pharynx and larynx due to smoking.

(2) On changing to Philip Morris, 62.3% of the cases cleared. The other 37.7% showed considerable improvement.

(3) On changing back to cigarettes made by the ordinary method, 80% showed a return of congestion within one week!

REPRINTS of published studies on the irritant properties of cigarettes are available. Address Philip Morris & Co. Ltd. Inc., 119 Fifth Ave., N.Y.

ACQUIRED ATRESIA OF THE VAGINA, CAESARIAN SECTION, AND RETAINED LOCHIA; FOLLOWED BY SEVERE LATE ECLAMPSIA

(Continued from Page 17)

DISCUSSION

Search of the literature fails to reveal another case combining all of the unusual features of this case.

We feel that there is a possible connection between the retention of decomposing lochial fluid and the very late eclamptic syndrome which occurred. This would be in line with the observations of others that retroplacental hematoma, infarction of the placenta, etc., tend to be associated with eclampsia in otherwise normal pregnancies.

The Case of Bidoire¹ is similar in the respect of moderate albuminuria (2 plus), and in the respect of the finding of a large amount of decomposing blood in the uterus, although in this case the pregnancy had not terminated at the time of the convulsions.

Audebert & Estienney² do not stress the likelihood of eclampsia as a sequel to retained lochia.

REFERENCES

1. Eclampsie convulsive compliquée d'hématome retro-placentaire sans apoplexie utérine. By: M. Bidoire. Bulletin de Société D'Obstétrique et de Gynécologie De Paris. 24-5 May 1935, p. 320.
2. La Retention Lochiale après la Césarienne Classique. By MM. Audebert & Estienney. Ibid. November 1929, p. 662.
3. Post partum atresia of the vagina, etc. By: Kanter & Klawans; Am. J. Obst. & Gynec. 2095 April, 1930.
4. Case of acquired Atresia of the vagina and its cure by Plastic Operation. By: M. Ramsyeke—J. Obst. & Gyn. British Empire. Aug. '34.
5. Case of acquired atresia of the Vagina, complicated by Preg-

formed when you do give information.

It will not be long before we will be turning our thoughts toward the convention which meets in Wichita this year. Let's plan on a large meeting this year. I wish I might know each one of the members. During the next three months I hope to plan a visit to each county Auxiliary and I hope through these personal contacts to know you better.

With best wishes for a bright and prosperous New Year for each member and for every Auxiliary, I remain,

—Mrs. La Verne B. Spake.

AUXILIARY NOTES

The Labette County Auxiliary joined the Medical Society November 22, as guests of the staff of the State Hospital. Following the dinner the two organizations held separate meetings, after which Mr. A. W. Day showed the moving picture "Tundra."

December 13th the Labette County Auxiliary met at the home of Mrs. Charles Miller. After a dessert course had been served, Mrs. Myrtle Miller, school nurse, gave an interesting and informative talk about her work. At the business meeting Mrs. T. D. Blasdel and Mrs. R. W. Urie gave reports of the recent State Board Meeting at Kansas City.

The Sedgwick County Auxiliary members brought many toys and games to their regular monthly luncheon at the Innes Tea Room December 11. The toys and games were for the children's ward of the County Hospital.

The Sedgwick County Auxiliary has placed Hygeia in sixteen rural schools of that county. Members of the Sedgwick Auxiliary have been busily engaged in assisting the promotion of the Annual Hospital Bazaar. The bazaar was an elaborate affair of two days duration and resulted profitably.

Mrs. D. W. Basham, of Wichita, Chairman of the Board of Public Relations of Wichita University Auxiliary has arranged a series of open houses for this season, the first to be entertained being the Sedgwick County Auxiliary.

Mrs. George Norton, Sedgwick County Auxiliary, President of the State Social Service Board, spoke at a meeting

AUXILIARY

PRESIDENT'S MESSAGE

With all the rush and bustle of Christmas and the holidays behind, we face a new year which I hope will hold for each of you great opportunities and advantages.

It should be a privilege to be a part of an organization which has the power to be so much help to the parent organization. When the year has closed I hope it can be said that we have really made PUBLIC RELATIONS contacts. Get behind your county president and their program and be informed when these questions come to the front in your lay groups. That will do more good than a lot of idle talk. Let's not sit idly by and let these measures of Health Legislation be passed without plenty of information from our side. It behooves every one of us to be on our toes at all times. Let me caution you to be well in-

THE STOKES HOSPITAL

Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Med. Dir.

923 Cherokee Road, Louisville, Ky. Phone High 2101-2102

DEPENDABLE PRODUCTS

Zemmer

for PHYSICIANS

Prescribe or Dispense Zemmer

Pharmaceuticals, Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled. K.A. 1-40

Write for Catalog
Chemists to the Medical
Profession.

THE ZEMMER COMPANY
Oakland Station, Pittsburgh, Pa.

Ambulance Service

To which you may
trust your most
gravely ill patient

•
NEW AMBULANCES
TWO TRAINED ATTENDANTS
•

*Rates: 15c a mile to any point in Kansas
—everything included*

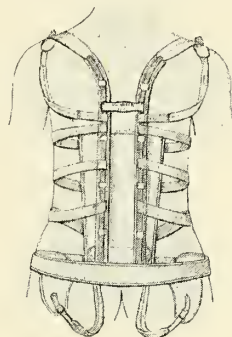
WALL-DIFFENDERFER
MORTUARY

Topeka,
Kansas.

237 West 6th
Phone 3-2326

BACK BRACE

For correction of faulty posture,
severe sacro-iliac strain, and conva-
lescent treatment of fracture of spine.



P. W. HANICKE MFG. CO.

1013 McGee Street
KANSAS CITY, MO.

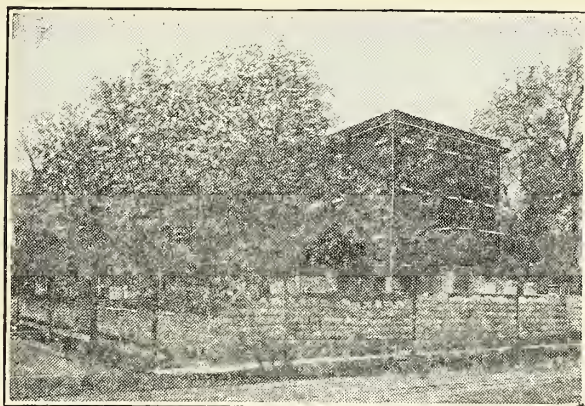
Tel. Victor 4750

THE MAJOR CLINIC ASSOCIATION

3100 EUCLID AVENUE

KANSAS CITY, MISSOURI

A Well
Equipped
Institution
for the
Nervous and
Mental
Diseases and
Alcohol,
Drug and
Tobacco
Addictions



Beautiful
Location
Large,
Well Shaded
Grounds,
Spacious
Porches,
All Modern
Methods for
Restoring
Patients to a
Normal
Condition

HERMON S. MAJOR, M.D.
Medical Director

HENRY S. MILLETT, M.D.
Associate Medical Director

HERMON S. MAJOR, JR.
Business Manager

of the child's guidance center at Friends University recently.

Mrs. H. E. Friesen is president of the Wichita Lionesses Club.

Mrs. Hal Marshall is chairman of the Revision Committee of the Wichita Twentieth Century Club Cook-Book.

The Central Kansas Auxiliary met December 7 with Mrs. J. B. Carter, in Ellsworth, at the Mother Bickerdyke Home of which Mrs. Carter is Superintendent. The election of officers resulted as follows: President, Mrs. P. S. Brady, of Hays; Vice-President, Mrs. Alfred Horejsi of Ellsworth; Secretary, Mrs. L. W. Reynolds, of Hays; Treasurer, Mrs. F. W. White, of Russell. The officers will assume their duties in May, 1940. Mrs. E. T. Gibson, of Jackson County,

Missouri, Auxiliary gave the Auxiliary an interesting talk on the activities of their Auxiliary. After refreshments a tour of the grounds and buildings of the Mother Bickerdyke Home was made. At seven o'clock the Auxiliary joined the Central Kansas Medical Society at dinner.

Mrs. F. E. Coffey was a delegate from the Hays Saturday Afternoon Club to the Thirty-eighth Annual Convention of the Sixth Districts Federation of Women's Clubs at Colby.

Mrs. J. B. Carter is president of the Kansas Order of Gold Star Mothers and very active politically among Republican Women of the state.

—Mrs. W. G. Emery, Chairman,
Press-Publicity.

Cook County Graduate School of Medicine

(In Affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue every two weeks. General Courses One, Two, Three and Six Months; Clinical Course; Special Courses.

MEDICINE—Personal One Month Course in Electrocardiography and Heart Disease every month, except August. Intensive Personal Courses in other subjects.

FRACTURES & TRAUMATIC SURGERY—Ten Day Intensive Course starting February 19, 1940. Informal Course Every week.

GYNECOLOGY—Two Weeks Course April 22, 1940. One Week Personal Course Vaginal Approach to Pelvic Surgery, April 8, 1940.

OBSTETRICS—Two Weeks Course April 8, 1940. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks Course starting April 8, 1940. Informal course every week.

OPHTHALMOLOGY—Two Weeks Course starting April 22, 1940. Informal Course every week.

CYSTOSCOPY—Ten Day Practical Course rotary every two weeks. One Month and Two Weeks Course in Urology every two weeks.

ROENTGENOLOGY—Special Courses X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

**TEACHING FACULTY—ATTENDING STAFF OF
COOK COUNTY HOSPITAL**

Address: Registrar, 427 South Honore Street,
Chicago, Illinois

Physicians Casualty Association Physicians Health Association



**HOSPITAL
ACCIDENT
SICKNESS**



INSURANCE

For ethical practitioners exclusively
(50,000 POLICIES IN FORCE)

Liberal Hospital Expense Coverage for \$10.00 Per Year

\$5,000.00 accidental death	For
\$25.00 weekly indemnity, health and accident	\$33.00 per year

\$10,000.00 accidental death	For
\$50.00 weekly indemnity, health and accident	\$66.00 per year

\$15,000.00 accidental death	For
\$75.00 weekly indemnity, health and accident	\$99.00 per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

\$9,000,000 PAID FOR CLAIMS

\$200,000 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the A.M.A.

The Journal Of THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

FEBRUARY, 1940

Number 2

PROGNOSIS IN HEART DISEASE*

Julius Jensen M.D.

St. Louis, Missouri

INTRODUCTION

Cardiological prognosis is always guesswork. We are as yet so ignorant of the various factors which affect heart disease that we cannot exactly predict its course, though we may know its final outcome. But step by step these factors are being studied and each new finding increases our accuracy in prognosis. The single guiding principle in attaining perfection in this field is the proper application of statistical methods which alone will enable us to sift mere clinical impressions from actual facts.

While some features are common to all forms of heart disease, the subject can best be approached by studying separately the two large groups of heart disease, degenerative or hypertensive heart disease, and rheumatic heart disease. Later we shall consider heart disease in relation to two important fields: surgery and obstetrics.

HYPERTENSIVE OR DEGENERATIVE HEART DISEASE

Our real difficulty with this form of heart disease is that we know so little about it. Its cause, its onset and general course are all practically unknown. The cause is concealed deep in the constitution of the individual; almost certainly it is intimately connected with his hormonal, probably gonadal balance. All the explanations generally advanced such as strain and stress and "metabolic" disorders I consider less important, though by no means negligible.

Almost certainly the onset is much earlier than we usually think. I need only remind you of Diehl's observations at the University of Minnesota. Amongst young persons some will show hypertension on excitement but not otherwise. This finding is often discarded as not important. But by following

Authors Note: For many thoughts and arrangements of fact in this paper I am indebted to Aastrup's "Prognostic Studies in Heart Disease." Copenhagen 1937.

*Presented at the 80th Annual Session of The Kansas Medical Society, Topeka, May 3, 1939. Reprinting rights reserved by the author.

a group of such students, now for over ten years Diehl has found evidence indicating that it is from these very people that the great army of hypertensives is recruited.

As hypertension advances the pressure increases, but the rate at which this happens varies from case to case. Some patients will carry on at a certain level for many years, in others the pressure will rise within a few weeks. We do not always know the cause of this change. It is often stated that the pressure is first labile, and that it later becomes fixed at a higher level. I do not believe that the blood pressure ever becomes fixed, at least I have still to see such a patient. In most cases the blood pressure will vary around a higher average as time goes on, but it will almost always come down considerably on rest and sedation.

The outcome of this disease is far better known; Bell and Clawson's classical study on the subject can be accepted as typical Figure 1. This may be taken as the final outcome for all cases as a group; the time elapsed before it is reached varies considerably, and there seems to be an important difference between men and women. Hypertension in men is usually first diagnosed in the fifties, amongst women almost a decade earlier, and in women it seems to take a more benign course as will be seen from Figure 2. The death rate over a seven and one-half or ten year period is much higher amongst men, and amongst women there is a definite relation between death rate and the height of the blood pressure, a relation which is much less marked in men.

The onset of myocardial insufficiency may be anticipated by various changes:

Most important of these is cardiac enlargement, because the chances and severity of congestive failure are intimately associated with the degree of cardiac enlargement. The degree of cardiac enlargement bears no certain proportion to the level of blood pressure; in fact, the relation is sometimes reversed; a normal or low blood pressure is seen with large feeble hearts. Nor is there anything certain about the rate at which enlargement occurs. I have followed patients with very high blood pressure over a number of years without being able to demonstrate any increase in cardiac size by x-ray. In gen-

eral it may be said that the larger the heart the poorer the prognosis.

The signs of early myocardial failure merge imperceptibly with the signs of physiological fatigue; from these signs to those of advanced failure the transitions are gradual. The prognostic significance of myocardial failure is influenced by three factors: The severity of the signs, the rate of their progression and the underlying cause.

The severity of the signs may be in the manner suggested by the American Heart Association, and, naturally, the prognosis is worse the more advanced the failure.

The rate at which failure progresses is an important prognostic sign. Depending on the severity of the cause underlying the failure, the patient may progress slowly or rapidly. One should, therefore, never state the prognosis too definitely until the patient has been followed for some time.

This same consideration applies still more to the cause of the heart failure. If the failure advances slowly and inexorably as the result of a progressive degenerative change in the cardiovascular system, the outlook is much more serious than if it has been caused by acute infection or overexertion. This applies especially to the large group of congestive failures which have been caused by acute respiratory infections.

Age also influences the prognosis, the older the patient the greater the chances of a terminal pulmonary infection in addition to the failure.

Finally, the response to treatment is in itself a valuable guide. Patients with the most trivial forms of failure may recover compensation simply from bed rest alone though most patients will benefit from digitalis. When the response to adequate doses of this drug is poor the outlook is gloomy, unless it can be explained by some factor which can be controlled, such as an acute infection.

Of the common cardiac irregularities only auricular fibrillation is of real prognostic importance. There are on record cases of long duration of this irregularity, it may even be the natural rhythm for some persons, but when it occurs as a complication of degenerative heart disease, it may be taken as a sign that the degenerative process has now advanced far and that failure is approaching. Unless embolism or pulmonary complications set in, the average duration of life after the onset of auricular fibrillation is three to four years. Only if the arrhythmia develops after the age of sixty-five, the prognosis is somewhat better.

The electrocardiogram is of great help in the prognosis of degenerative heart disease. If it is normal the immediate outlook is good, very few patients

die within the next three or four years from congestive failure.

While the deep q-wave in the third lead is usually associated with myocardial damage, it more directly results from axis deviation, and, is, therefore, in itself, probably a matter of no great prognostic consequence.

The characteristic T wave changes, on the other hand, are much less favorable, though even of this finding we may have formed an unduly pessimistic view. Most often they are found in patients who are being electrocardiographed because of cardiac symptoms, and it is then not known how long they have been present during the asymptomatic stage. Not until patients with hypertension become more routinely and regularly electrocardiographed can the prognosis of T wave changes be truly evaluated.

Other changes, such as delay in auriculo-ventricular or intra-ventricular conduction of impulses, are usually of grave prognostic importance, though, of course, no electrocardiographic sign is of absolute value.

In summary, then, myocardial failure is the most common outcome in hypertension, but its onset is often delayed for many years. Some electrocardiographic signs and cardiac enlargement are warning signs that it may be approaching, though no sign is as certain as the approach of the failure itself; falling vital capacity, rising venous pressure, increasing dyspnea on effort and rales at the bases of the lungs.

Angina pectoris carries an even more uncertain prognosis, for any one attack may be fatal, and the dangerous complications of coronary occlusion may occur at any time. Therefore, the duration may be from one attack to thirty years, though the average is six to seven years. The point of most immediate value in the prognosis is the obvious one of frequency and severity of the attacks. A normal blood pressure adds about a year to the average prognosis, though most of the patients have hypertension. Also a normal electrocardiogram is favorable, though less so than in the absence of angina pectoris, for it is in this condition liable to sudden changes for the worse. In older persons, electrocardiograms are less valuable, the damage of which changes are evidence, seems less progressive and, on the other hand, even normal electrocardiogram is quite consistent with a myocardium of poor reserve.

Coronary occlusion occurs most commonly in men above the age of forty-five, though it may, of course, also occur in others. In the absence of hypertension the diagnosis should be made with caution in women, and the younger the patient the more conclusive should the evidence be. Hypertension is a frequent etiological factor, as well as a family his-

tory of cardiovascular disease, and, especially, angina pectoris, or better coronary sclerosis, for this condition may be asymptomatic.

The prognosis, naturally, depends on the severity of the disease. While most of the severer attacks are now diagnosed, many of the lighter ones still pass unrecognized. The death rate of a given series, therefore, depends on the accuracy of the diagnosis and the selection of the material. In the material reaching the receiving room of a general hospital the death rate is great, in the experience of a general medical service it is less and in the experience of one skilled in recognizing the lightest attacks it will be low. Consequently percentage estimates are of little value in the individual case; some have found the immediate mortality to be fifty per cent, Connor and Holt's figure was sixteen per cent.

Most patients die during and shortly after the attack, consequently the prognosis rapidly improves as the patient survives the first few days, especially after two months are the prospects bright that months or years will intervene before the next attack.

The danger of a fatal outcome increases with each subsequent attack; Master, Jaffe and Dack found the death rate in the first attack, nine per cent, in the second twenty-two per cent and in the third forty-six per cent.

If the patient survives the first attack Connor and Holt found that his chances of living one year were seventy-five per cent, two years fifty-six per cent, and five years twenty-one per cent. On the average, a patient who has had a coronary occlusion may expect to live three years, though sometimes they survive ten or even seventeen years.

Contrary to the earlier belief the prognosis is about the same in occlusion of the posterior and of the anterior coronary artery.

During the attack, the severity of the occlusion and consequently the immediate prognosis may be estimated by the general state of the patient, the degree and duration of the accompanying shock and drop in blood pressure. The more fever the more serious the case. Arrhythmias; extrasystoles and auricular fibrillation add to the gravity, and in the presence of bundle branch block, the prognosis is very grave.

Coronary occlusion in young persons is rare, when it does occur it is often in the absence of angina pectoris, with normal sized heart and normal blood pressure. In these patients the prognosis seems to be much better than in older persons.

RHEUMATIC HEART DISEASE

In Rheumatic Heart Disease the correct diagnosis is most important. The necessity for this statement

is the fact that many persons are still living who years ago were condemned to an early death from "leaking valves". They were misdiagnosed, having only functional murmurs. In its early stages the diagnosis of rheumatic heart disease offers difficulties to the most expert observer.

When the diagnosis is certain the prognosis depends somewhat on the age at onset of the rheumatic infection. In younger persons the disease may take a progressive and disastrous course. In about five per cent of young sufferers it will have run its course within a year, in ten per cent within five years. However, in the majority the acute infection subsides, the valvular lesions scar up, and the condition may remain quiescent for many years. This is one of the fundamental changes in our concept of rheumatic heart disease. It has been brought about especially by the Frenchman Laubry. We used to think of this disease as a constantly progressive affair, gradually consuming the reserves of the heart. We now believe that frequently a state of equilibrium is reached, during which the valvular lesion is not progressive and during which cardiac hypertrophy is adequate. If nothing happens to upset this equilibrium it may last indefinitely and actually five to ten per cent of the patients reach the age of seventy years or more. This is especially true in the case of men, who are prone to aortic lesions which draw on the richer reserves of the left ventricle. The younger patients offer the better prognosis once the lesion has become arrested; if the rheumatic infection first occurs in adult age the life expectancy is not so good.

To express these observations in figures is not easy, for the results obtained by statistical studies depend so largely upon the source of the material. Amongst persons with rheumatic heart disease who reach adult life, probably twenty-five to forty per cent survive the age of forty years. The very important therapeutic principles deduced from these observations I am sure will be brought out in the round table discussion.

As the patient with rheumatic heart disease advances through life, he is threatened with various dangers (Figure 3), during childhood and adolescence the rheumatic carditis itself is most likely to prove fatal, and here we are, of course, not thinking only of endocarditis; the infection attacks every structure in the heart; endocardium, myocardium and pericardium, even the peripheral arteries suffer demonstrable lesions. A little later, during early adult life, bacterial endocarditis is most to be feared: While this complication may occur at any age, I believe it predominates during the period after the acute rheumatic infection has quieted down and before the

threat of decompensation becomes a reality. Even then the valves form a site of minor resistance to organisms circulating in the bloodstream. In bacterial endocarditis the prognosis is not entirely hopeless. It has long been thought that some of the milder cases recover spontaneously, and even amongst well established cases, recovery is not unknown, occurring in about one per cent. Whether the prognosis will be materially improved by the new chemo-therapeutic methods is yet too early to say, though many recent observations are quite encouraging. About five per cent of patients with rheumatic heart disease succumb to subacute bacterial endocarditis. A little later in the course of rheumatic heart disease the danger of embolism looms large, either from valvular vegetations or from mural thrombi occurring in the course of auricular fibrillation. Occasionally, embolism will occur in a regular, compensated heart which is not the seat of an acute infection. It has been estimated that embolism is the terminal event in about ten per cent of those suffering from rheumatic heart disease.

By far the most important cause of death in rheumatic heart disease is congestive failure. Curiously enough we have no certain knowledge, neither of the average age at which the patients die nor of the average period of survival after the first rheumatic infection. Figures 4 and 5 will illustrate the wide spread of the available information. In a most general way we may conclude that the patient with rheumatic heart disease who reaches adult life is likely to survive for some twenty years after his first attack of rheumatism and that the average age at death is somewhere in the middle of the thirties.

As in degenerative heart disease, the early signs of myocardial insufficiency are not of immediately sinister importance. Dyspnea on effort may last for five to eleven years, and even after edema has first made its appearance some patients still live as much as five years, though usually the end will come within the next twelve or eighteen months. The prognosis definitely depends on the care and management given the patient, especially because congestive failure so frequently is precipitated by some curable or removable factor, such as infection or strain. Generally speaking the prognosis of rheumatic heart disease is somewhat better in mitral stenosis than in the case of aortic lesions. The combined mitral and aortic lesions carry a bad prognosis. Possibly because they respond better to digitalis, patients with auricular fibrillation seem to do better than those with sinus rhythm. If pulmonary edema supervenes the patient is unlikely to survive two years.

The prognostic significance of auricular fibrilla-

tion has been the subject of much controversy. Some observers believe that this irregularity causes congestive failure, while others think, that in itself it has little effect on the circulation, but that it is a sign of advanced myocardial damage. This latter view is undoubtedly true in many cases. When it is controlled with digitalis there is no evidence that auricular fibrillation should impair the circulation; while uncontrolled fibrillation must necessarily affect it.

In support of the view that auricular fibrillation is a sign of advanced heart disease is the fact that it generally occurs when the disease has been established for a long time. It is rare below the age of twenty, but when it occurs the prognosis is very serious. In advanced rheumatic heart disease it is common, occurring in as much as eighty per cent of patients over twenty years. Generally it carries a prognosis of two to three years though exceptionally a patient may live for ten to twenty years. Only one out of four patients will live for more than five years. The prognosis is bad if the rate continues uncontrollably fast (over 120). It is also of serious significance when it occurs during a general breakdown of the circulation or during a terminal illness. If such patients are excluded from the above calculations the prognosis is somewhat better in auricular fibrillation. If a patient with mitral stenosis develops fibrillation without other signs of aggravation of his disease the average life expectancy is about five years.

In rheumatic heart disease the prognosis is further influenced by the valves which are affected. In aortic lesions the patient is more susceptible to bacterial endocarditis but can otherwise draw on the greater reserve of the left ventricle, while the mitral lesions are more prone to complications arising from pulmonary congestion and auricular fibrillation. Especially in well developed mitral stenosis do the lungs bear close watching.

HEART DISEASE AND SURGERY

During the time yet at my disposal I believe it would be well to discuss heart disease in its relation to surgery. The guiding principles in this problem is the just evaluation of the proportion between the lesion and the extent of the necessity for the operation.

The surgical importance of increased blood pressure is determined less by the absolute height of the blood pressure than upon the concomitant factors, the extent to which the heart, the kidneys or the peripheral circulation are impaired. When dealing with high blood pressures it is important not to depend on one or even several blood pressure readings. Almost all blood pressures are so labile that close observations under favorable conditions will reveal

readings much lower than can be obtained in the office or during the strain of general diagnostic work.

The finding of a high blood pressure, therefore, should never in itself determine the advisability of an operation, but should necessitate a careful and complete cardiovascular renal investigation.

The next most common finding to trouble the surgeon is a murmur. Just as the finding of an increased blood pressure this finding is but a sign; only when it has certain characteristics does it justify the diagnosis of valvular lesion. In most cases it is merely an indication for a thorough cardiac investigation. If this results in a definite diagnosis of organic heart disease, the estimate of the operative risk again depends upon how far the disease has advanced, and, especially, on the degree of decompensation.

In the cardiac examination of surgical patients the accurate determination of the size of the heart may be most important. Whenever possible this should be done by x-ray examination; palpation and percussion are far too unreliable to be used with confidence.

Of arrhythmias only two common ones are important—auricular fibrillation and extrasystoles.

Except in unusual cases and in hyperthyroidism auricular fibrillation is a sign of advanced myocardial disease. Unless it is well controlled with digitalis, operations should not be lightly undertaken in its presence.

Occasional extrasystoles are of no significance. When they occur with great frequency they indicate myocardial irritability which may be associated with impaired cardiac reserve. Sometimes the extrasystoles are temporary, arising from mental strain or acute infection; then the operation is better postponed until the patient's condition is improved.

Other arrhythmias are less important, partly because they are rare.

The electrocardiogram is of definite value in evaluating the surgical risk for the operative death rate is definitely higher amongst patients with abnormal electrocardiograms. But again, the electrocardiographic findings are only one factor: The general cardiovascular condition must be weighed against the necessity or advisability of the operation. The most important findings are, besides the arrhythmias which have already been discussed, marked T wave changes and changes in the QRS complexes indicating marked impairment of intraventricular conduction.

Most important of all cardiac factors is that of cardiac function itself. Depending on the degree of myocardial impairment the operative risk is in-

creased. In the presence of frank decompensation, the failure should receive the best possible care before the operation. There is, however, no reason to treat any patient prophylactically with digitalis or other drugs, in the absence of heart failure, for there is no evidence that operations in themselves, either precipitate or aggravate congestive failure. On the other hand, not even advanced heart failure is an absolute contraindication against operation. Our experience with total thyroidectomy for heart failure has shown, that with care even badly decompensated patients can be submitted to operations at relatively small risk.

The effect of the operation itself then, is not on the state of compensation, and any risk to be considered is rather indirect. Most inhalation anaesthetics involve some anoxemia and this may aggravate any circulatory defects which are already present. The anoxemias of any well conducted anaesthesia is, however, insufficient to influence heart disease which is adequately compensated. Furthermore, operations involve a degree of shock which varies in proportion to the severity and the form of the operation. Some forms of heart disease, especially degenerative heart disease, seem to be associated with a poor comeback from the operation, but rarely do the patients actually become compensated. This holds especially true if spinal or avertin anaesthesia is employed; then patients with degenerative or hypertensive heart disease run a special risk of fall in blood pressure, which may be serious and which is not always relieved by drugs of the ephedrin group. Actually the death rate from spinal anaesthesia has exceeded that of other anaesthetics in some of the published experiences. Finally, in the case of post-operative infections, the cardiac patient runs a special risk of decompensation.

Investigating the operative risk in hypertensive heart disease, I found some years ago, in a paper read before the American College of Surgeons, that also the form of operation must be considered in the operative prognosis. Operations on the eye, ear, nose and throat carry very little danger. Genito-urinary operations, on the other hand, have a comparatively high death rate, much higher than comparable gynecological operations.

Finally, there is the question of anaesthetics, for the outcome of an operation may depend upon the proper anaesthetic. The combination which has worked best in our experience has been a combination of thorough pre-operative sedation with barbiturates and morphine (except in the case of Caesarean section) with local and inhalation anaesthesia, novocaine being used without adrenalin whenever the myocardium is definitely damaged or the blood pres-

sure high. The novocaine serves a double purpose of enabling the surgeon to begin the operation without inhalation anaesthesia, and later it works synergistically with the gas necessitating the use of a smaller quantity thereof, thus diminishing the degree and duration of anoxemia. Others who have studied this problem have recommended straight ether anaesthesia.

In summary it may be said that the surgical prognosis in heart disease depends upon a proper and thorough understanding of the entire cardiovascular picture, especially the state of compensation, a mature evaluation of the severity of the heart disease against the necessity and kind of operation, and, finally, the proper and careful use of anaesthesia.

HEART DISEASE AND OBSTETRICS

In the study of the effect of pregnancy on valvular disease of the heart it should be remembered that rheumatic heart disease is not continuously progressive but passes through phases of quiescence interrupted by periods of exacerbation. There is no evidence that normal pregnancy can affect these phases. Provided the circulation is compensated, there is no reason to believe that rheumatic heart disease should be aggravated by pregnancy; nor has it been possible to demonstrate that pregnancy shortens the life expectancy of the compensated cardiac patient.

The internist is more concerned with those women who conceive when they are approaching decompensation and with those in whom the break comes during pregnancy. Late pregnancy and labor entail a real risk to such patients.

It follows logically that this problem should be attacked by preventing heart failure in pregnant women. Women unfit for motherhood should not become pregnant. Frank decompensation is obviously a contraindication to pregnancy but symptoms of a milder sort must be evaluated in the light of the patient's social and domestic circumstances. Even in the absence of marked symptoms there may be evidence that the disease has almost run its course. Auricular fibrillation, marked cardiac enlargement and involvement of both the aortic and mitral valves are ominous signs, although none of them are in themselves incompatible with successful child-bearing.

Few cardiac patients compensated when they conceive will develop serious trouble if they follow adequate rules for care during pregnancy. Their activities should be adjusted to their capacity and any infection, especially colds, should be treated with the greatest of care.

The pregnancy should be interrupted only in case of heart failure which does not respond to treatment. In many cases, even though interruption is necessary,

it may be possible to defer the operation until the thirty-sixth week or later when the chances for the infant are so much better.

Most cases can be delivered normally although usually forceps are applied during the final stages. One of the greatest recent advances in this field is Caesarean section in serious cases. It is especially indicated in cases of decompensation near term. If a patient has the strength to stand normal delivery, this strain is preferable to the risk of operation; but if decompensation is manifest, Caesarean section under local anaesthesia probably offers the best chance.

1. OUTCOME OF HYPERTENSIVE HEART DISEASE (Bell and Clawson)

Myocardial insufficiency	45%
Coronary disease	16%
<hr/>	
Total cardiac	61%
Apoplexy	19%
Uremia	9%
Other causes	12%

2. EFFECT OF SEX ON PROGNOSIS OF HYPERTENSION

	Men	Women
Blackford & Wilkinson Death rate in 10 years..	82%	50%
Schwensen 7½ years..	74%	50%
<hr/>		
Death Rate		
Blood Pressure above 225.....	71%	
Blood Pressure 200-225.....	44%	
Blood Pressure 170-199.....	32%	
This relation obtained in women only.		

3. CAUSES OF DEATH IN RHEUMATIC HEART DISEASE

Youth	Acute carditis	—%
Young adults	Bacterial endocarditis	5%
Young middle age	Embolism	10%
Middle age.....	Congestive failure	50%
Other causes		10%

4. AVERAGE AGE AT DEATH

Astrup	45.5
Reid	43.0
Gilchrist	37.8
Scott & Henderson.....	37.2
Grant	36.0
DeGraff & Lingg.....	33.0
Willius	32.0
Coombs	28.2

5. SURVIVAL AFTER FIRST RHEUMATIC INFECTION

DeGraff and Lingg.....	15 years
Willius	14 years
Cabot	9 years
Gilchrist	22.5 years
30.1 years	
Astrup	25 years

"Make the sanatorium the first resort of the tuberculous, not the last."—H. E. Dearholt, M.D.

APPENDICITIS IN CHILDREN

Eugene O. Parsons, M.D.**

Kansas City, Missouri

In this paper an attempt is made to analyse and evaluate some of the current literature on the subject, present a few statistics and stress some personal observations and opinions.

Discovery, diagnosis, refinement, technique and treatment of appendicitis are almost wholly American. Reginald Fitz, professor of Pathology and Internal Medicine at Harvard University in 1886, is credited with the first complete description of appendicitis as we know it today. Fitz disagreed with the popular theory of the time, that pain in the right lower quadrant was due to perityphilitis, and contended that this entity was a result of inflammatory lesions arising in the appendix. In fact Fitz introduced the term appendicitis. Three years later, in 1889, Dr. Charles McBurney of New York, stressed the point that this condition should be treated surgically, and that early operation, before an abscess or a mass was noted was the procedure of choice. At this time the treatment was almost exclusively medical. This was especially true of the early stages. Surgery was used only for the late cases of abscess and peritonitis. Sengler, in the early nineties reported a series of eleven consecutive operations with eleven deaths. Naturally all of these were late cases of perforated appendix with a diffuse generalizing peritonitis.

Statistics show that fifty per cent of all cases of appendicitis occur within the first twenty years of life. Of this number we find 2.5 per cent occurring from one to five years of age, six per cent occurring from six to sixteen years of age, 16.5 per cent occurring from ten to fifteen years of age. Of these groups the mortality in patients one to five years of age is eight to ten times that found in the five to fifteen year group. This is due to delayed diagnosis and the rapid onset of peritonitis. Thus we find a yearly increase in the incidence up to the twelfth year, where the largest number of cases are found in children. It is more prevalent in the summer months and is more frequent in males in the ratio of about three to two. The mortality in children under five years averages from fifteen to twenty-five per cent, while from five to twelve years it is about four per cent.

Appendicitis may occur at any age, from the bassinet to the aged. Corcoran reports a proven case in a child two days old. Very few children up to the

age of two are seen with appendicitis. Wangensteen believes this to be due to the fact that the appendix is conical, and is therefore naturally less easily obstructed.

All of us are acquainted with the classical symptoms of epigastric pain, followed by nausea and vomiting. In children all of these vary to a great degree. The pain varies from a dull ache or sense of fullness, to a sharp stabbing pain. Nausea and vomiting are not always present, and the absence of these two symptoms certainly does suggest the fact that the appendix may not be the offending pathology present. The atypical cases are the ones which tax the diagnostic ability of the surgeon. The great differences in pain, tenderness, rigidity and muscular guard are all well known. Even a perforated appendix with normal temperature cannot be considered rare. Vomiting is quite constant and tends to come on after the pain, although it is not persistent or forceful. As a rule constipation is present, but diarrhea may be present, and is not an uncommon finding, especially if there is a mass present, or when the appendix is lying low in the pelvis. Potts reports a series of 592 cases in which three per cent had diarrhea. In the perforated cases it is much more common, when about twelve per cent present this symptom. In the younger group restlessness is very significant. A child who cries a great deal, is very restless, unable to sleep, and tends to assume a position with the right leg flexed on the abdomen, should be regarded with suspicion.

A most important point is the almost constant finding of anorexia. This is very marked, and in a large percentage of cases amounts almost to a complete aversion for food. I have never seen a young child with acute appendicitis hungry or the least interested in nourishment of any kind.

Chills in children with appendicitis is very rare.

Dysuria and hematuria may be present if the appendix is in the pelvis, or if a mass is present situated near the bladder or ureter.

A family history of appendicitis is very important. Nicholson reports a series of 127 acute cases with a positive family history in sixty-three per cent.

The temperature and pulse of early acute appendicitis usually presents only a very slight rise and the temperature rarely goes above 102 degrees fahrenheit until after the appendix has perforated.

In young children the diagnosis rests almost entirely on signs of peritoneal irritation and rebound pain.

Entirely too much emphasis is placed on the leukocyte count, which is very unreliable. It may vary as much as several thousand in a normal person in a course of a few hours. The count may be high

**From the Department of Surgery, University of Kansas School of Medicine, Kansas City, Kansas.

or low, it may show a high polymorphonuclear differential, or it may approach the normal. The increase may be due to a number of different things. The leukocytosis and relatively high differential count of polymorphonuclear cells is certainly evidence of acute appendicitis, but should merely be used as a check on the clinical evidence present. If the diagnosis cannot be made from the history and physical findings present, it certainly should not be made on the fact that the count has increased one to four thousand in the course of a few hours, as is done in so many cases. I have seen the white count vary from three thousand to forty-three thousand in acute appendicitis.

The pulse in young children is normally faster than adults, and rises in about the same proportion as the temperature.

One point that is not stressed enough in my opinion is rebound pain. In my experience this is the most constant physical sign present in acute appendicitis. This finding is very definite when slow easy pressure is made at any point on the abdomen and then suddenly released, there is definite unmistakable pain usually referred to the right side. This finding is practically always present, and invariably presents itself before the general abdominal guard and rigidity are found. It is very easy to elicit even in very young children as they will cry out immediately when pressure is released, or if already in pain, eliciting this sign will increase their discomfort. Personally I have never seen a proven case of acute appendicitis which did not have definite rebound pain.

A rectal examination should always be made. The diagnosis of an acutely inflamed appendix lying low in the pelvis is very frequently confirmed by this procedure.

Mesenteric lymphadenitis, pyelitis, pneumonia and pneumococcic peritonitis are the most common diseases mistaken for an acute appendicitis, although other conditions must be kept in mind that may exist and confuse the examiner. It is often said that appendicitis in children is seen as a complication of other acute infectious diseases. I would like to quote that the London Infectious Hospital for Children, treating twenty-five thousand cases from 1931 to 1935 only two cases requiring surgery were encountered. The diagnosis of acute appendicitis may be much more difficult when some infectious disease is prevalent, as many such diseases are associated with abdominal pain, nausea and vomiting. Classical acute appendicitis colic may occur with measles, but measles is usually found associated with a laryngitis or a nasal pharyngitis. Another differential diagnostic point is the almost constant presence of the well known Koplik's spots in measles. The pain in these

cases is usually not so acute, and is not localized over McBurney's point, but is more diffuse.

A slowly developing central pneumonia must be considered in every case. The true and exact mechanism of pain referred to the abdomen is not known at this time. The pain is more of a generalized type, and is not localized at any one certain area as a rule. In central pneumonia physical findings in the chest tend to develop very slowly. Pneumonia of sufficient activity, to cause a high temperature, may sometimes progress for three to six days before the usual chest findings are present. This is not true of acute appendicitis. In this disease conditions change very fast and there is usually a very marked change in twenty-four hours or less. A lateral x-ray plate of the chest very frequently discloses a small area of central consolidation, that is otherwise hidden by the heart shadow in the usual anteroposterior plates. One of the most constant differential points is the type of respiration found when the patient is examined. In appendicitis there is a splinting of the abdominal walls and the respiration is almost wholly costal. In early pneumonia the opposite holds true. There is more or less splinting of the intercostal muscles and the breathing tends to be more abdominal in type.

Pneumococcic peritonitis must be kept in mind, especially in girls. This condition is encountered only rarely, and only a few cases are diagnosed before operation. The mortality is always high, running from fifty to one hundred per cent with any type of treatment. The pus encountered in these cases is very characteristic. It is a very light lemon yellow in color, has no odor and is mucilaginous in consistency. It very seldom occurs associated with pneumonia. In children the most common cause is upper respiratory infection, in contrast to adults and older children where the usual mode of infection is through the vaginal tract. The differential diagnosis is based mainly on the very **EARLY HIGH TEMPERATURE**, early **GENERALIZED DISTENTION**, and the **DIFFUSE** abdominal tenderness and pain.

Pyelitis frequently causes symptoms not unlike those of acute appendicitis, but there is also usually tenderness and pain over the kidneys. Pus in the urine is usually diagnostic, but one negative test cannot rule out the possibility, as it is well known that pus in pyelitis tends to come in "showers". That is, one may have three or four negative specimens and the next may be loaded with pus cells, even in clumps. The temperature in pyelitis is usually much higher than the general condition of the patient indicates.

Intussusception usually causes sudden, extremely acute pain, associated with the classical picture of shock, and the mass is palpable, usually in the right

lower quadrant. In suspected cases a barium enema will reveal the unmistakable "fish-mouth" deformity. One should not wait for the appearance of "cat-sup" stools as this is usually a later finding.

Acute mesenteric lymphadenitis is very difficult to differentiate from appendicitis, although the tenderness is not generally so marked. It is dangerous to delay operation in a case of supposed mesenteric lymphadenitis and allow a true case of appendicitis to perforate.

Meckel's diverticulitis is rarely diagnosed except at operation and presents little or no difficulty, as it is a definitely acute surgical condition. The history, symptoms, findings and laboratory work may be identical with that of acute appendicitis, depending upon the location of the diverticula, and the direction it is pointing.

Appendicitis may well be divided into four groups:

1. Acute appendicitis without perforation.
2. Acute appendicitis with early perforation.
3. Perforative appendicitis with abscess formation.
4. Perforative appendicitis with generalized peritonitis.

In early acute appendicitis, before a mass is palpable, or before distention has occurred, there is no medical treatment, the case is purely surgical. The removal of an early uncomplicated, unperforated appendix is one of the safest procedures in surgery. In experienced and skilled hands the mortality is less than one per cent.

Acute appendicitis with early perforation, that is while the peritonitis is localized, and before distention occurs, is also a procedure with a very low mortality, especially when a McBurney incision is used.

Children have less general resistance to peritoneal infection than adults, and the thin appendiceal wall found in infants and young children is much more susceptible to perforations. Another factor is the very short omentum which is much less effective than in adults.

Acute appendicitis with a palpable mass in the right lower quadrant presents a choice of procedure. Should the patient be operated upon, or should conservative and supportive treatment be used? At the University of Kansas Hospitals, which has a very active surgical service, and at the Children's Mercy Hospital in this city, which admits approximately twenty-five hundred patients a year, and has a fairly active surgical service, appendiceal masses are never operated upon until they are proven to be true abscesses, and then the abscess is merely drained without any attempt at removal of the appendix. About seventy-five to eighty per cent of the masses seen in

the right lower quadrant are omental masses. That is, they are inflammatory masses involving the omentum or intestines with the appendix. These masses should be treated conservatively, and about eighty per cent of them will subside spontaneously. Potts reports two series of this type of case. One series of twenty-five was treated conservatively with no surgery, with a mortality of zero. In a similar series of thirty-five cases treated with surgery, the mortality was 11.4 per cent. The operative cases also had many complications. Twenty per cent, or seven cases, developed fecal fistulae. I have never seen an appendiceal mass treated conservatively die. To see a mass large enough to fill the right lower quadrant, and to see this same mass disappear under conservative treatment, is to say the least most convincing of the extreme protective ability of the omentum and peritoneum. The exact course of these cases can be determined only by close clinical observation. When, and if, the patient develops a classical "picket type" temperature, indicative of a frank abscess it is drained extraperitoneally. If a true abscess does form, very frequently it will rupture into a viscus, either the intestinal tract or the bladder. If the former occurs the patient is cured, and if it drains into the bladder trouble is always encountered. When it becomes necessary to drain an appendiceal abscess it should always be done when possible by the extraperitoneal route, usually a very simple procedure.

When, and if, the mass subsides, we firmly believe that the appendix should be removed. The question arises when should this operation be done. If operated upon too soon after the mass has subsided, there is still marked evidence in the abdomen of plastic peritonitis due to the previous attack, and many adhesions are present, often making the surgical removal of the appendix technically very difficult. By trial and error we have found that the time interval of three months is ideal. Our standing order to these patients on dismissal is to return to the hospital in three months for the removal of the appendix. The inflammatory adhesions at this time have for the most part been absorbed, and frequently it is impossible to find any evidence whatsoever of a previous infection. In some cases we find that a portion of the appendix has amputated itself, and only a very fine fibrous cord structure remains.

The handling of the last group, perforating appendicitis with generalized peritonitis constitutes the real problem of this disease. It is in this group that the high mortality occurs. The time element is very important and varies a great deal in these cases. It is sometimes said that one should never operate on an appendix on the fourth or fifth day of the disease. I have seen any number of cases who were better

operative risks on the fourth or fifth day than others who have been ill only two days. What is the difference? Is it due either to progressive rapidity of the pathology in the diseased appendix, or to the resistance of the peritoneum, or more probably a close combination of the two. One patient may have marked distention with all the signs and symptoms of generalizing peritonitis in eighteen to forty-eight hours. Another apparently similar case may take three to five days to reach the same stage. We firmly believe that DISTENTION OF THE ABDOMEN IS THE ONE MOST IMPORTANT POINT TO BE CONSIDERED IN EVALUATING THE OPERATIVE RISK IN ACUTE APPENDICITIS. The mortality of these generalized peritonitis cases is very high no matter what course is pursued, but we feel that conservative treatment of generalized peritonitis when distention is present offers the patient more chance of recovery.

An operation on a dehydrated child with a generalized peritonitis is of little or no value. Any operative procedure done in a case with generalized peritonitis will probably break down all the defensive mechanism nature has thrown around the appendix to wall it off. These patients should be given supportive treatment by intravenous fluids, transfusions and nasal tube suction. During this treatment the blood chemistry should be frequently estimated and maintained within normal limits by giving parenteral fluids.

May not the type of incision used play a part in the mortality of appendicitis? It is certainly true that when an abscess any place on the surface of the body is drained, the incision is made as nearly as possible over the center of the pathology present. Why then in an acute appendix, which perhaps has already perforated, make an incision such as a right rectus, paramedian, or midline, which is two or three inches from the lesion. Such an incision makes it absolutely necessary to handle the small intestines to a greater or less degree, thus spreading throughout the peritoneal cavity any infection present, causing needless retraction of the abdominal muscles, and usually making it necessary to pack off the small intestines to keep them out of the operative field. In a perforated case this is certainly adding more trauma to tissues already injured. The ideal to keep in mind is to have the incision over the center of the pathology present. A McBurney, or muscle splitting incision is the answer. In this type of incision the first intestine seen in ninety per cent of the cases, is the head of the caecum. In the vast majority of cases the small intestine is not even seen, and certainly is not handled. The part of the small intestine which does occasionally present is usually the terminal ileum. It

is easily seen that this incision must of necessity offer the least trauma to the peritoneum, and the least possibility of contamination to the adjacent peritoneal structures and contents.

Leonard and DeRos report on thousand consecutive acute appendicitis cases and their mortality by incision is as follows:

Midline, 11.0 per cent.

Right rectus, 4.5 per cent.

McBurney, 3 per cent.

Taylor of London reports one thousand consecutive cases of acute appendicitis with the mortality four times greater with the right rectus incision as with the McBurney.

From these statistics concerning two thousand cases, one is certainly justified in drawing the conclusion, that at least one factor in the mortality of appendicitis is the type of incision used, and that the mortality increases as the incision line is moved away from the appendix toward the midline.

In planning the incision for drainage of appendiceal abscess it is almost impossible to make the incision too close to the anterior superior spine. If the mass cannot be palpated when the peritoneum is reached it is very easy to push the peritoneum aside medially and slip down the lateral side of the peritoneal wall until the mass can be palpated. It can then be broken into and drained easily and safely, as all drainage is extra-peritoneal. It must be remembered that pus should not be drained through the peritoneal cavity.

It is said that old beliefs die hard, and an old axiom has been that where there is pus, let it out, but we are daily discovering in the great recuperative powers of the peritoneum, that immediate drainage of collections of pus is not necessary. Sherren, after a most active surgical service of twenty years at the London Hospital, stated that the only change he had made "was a greater conservatism and patience in dealing with cases of appendiceal abscess".

Drainage is a very important part of the operation. In the early perforative cases drains are usually placed in three places. One in the right gutter toward the liver, one to the base of the appendix and the third to the pelvis. All are placed lateral to the intestines. Drains are placed merely to guide and form an avenue of least resistance for any material to get to the outside, as it is a mechanical impossibility to drain the peritoneal cavity. Only the non-perforative cases should be closed tightly.

The post operative care is most important. Many cases are saved by proper and timely post operative treatment. All perforative cases should be placed on routine peritonitis procedure as soon as the patient leaves the operating room. These include hot moist

heat to the abdomen, hypodermoclysis and venoclysis of physiologic saline, glucose, Ringer's solution and Hartman's solution, controlling the volume by close study of the daily blood chemistry. One of the most important points is the decompression of the intestinal tract by constant negative pressure with the Levine nasal-duodenal tube. One of the most efficient methods today is that which is produced by the Curphy-Orr bottles. A slight modification of the apparatus described by Wangenstein. The negative pressure is produced by a siphon action from one bottle elevated about three feet above a second bottle. The negative pressure thus established is transferred to a third bottle which is in turn connected with the nasal duodenal tube. This keeps the stomach and upper intestinal tract empty. It is very well tolerated and in fact patients will ask for it when they tend to become distended, once they have had experience with it. Another excellent point appreciated by the patient is that they may have all the fluids they desire by mouth, since they are immediately removed by siphonage. By using this method a very accurate record may be kept of the actual intake and output of the patient.

Potts reports a decrease from 21.6 per cent to 12.1 per cent in peritonitis cases by using the Levine nasal catheter with negative pressure. This procedure should be used in all perforated cases as soon as the patient has recovered from the anesthetic, and in any case at the first sign of gas or distention. Some difficulty may be encountered with children pulling out the tube. This can easily be remedied by putting the arms in restraint. Another reason for the lower mortality in acute appendicitis is the more intelligent use of parenteral fluids. In previous years fluids were given usually as tap water proctoclysis. Actual clinical data and experimental work recently reported by Helwig of this city shows that such administration in large amounts will produce water intoxication and even death. Hypodermoclysis and venoclysis of five per cent glucose in physiologic saline or Ringer's solution and the use of Hartman's solution, which is lactate Ringer's solution, is now routine. A good rule to follow in children is a total fluid volume of fifteen hundred to twenty-five hundred cc. of equal parts of saline, and five per cent glucose in saline, or Ringer's or Hartman's solution depending on the blood chemistry findings. Transfusions of citrated blood are given to replenish the blood protein, and in very toxic patients as the case indicates.

Elman has recently reported the clinical use of amino acids given intravenously for protein loss with very good results. The product is much too expensive for general clinical use at this time, but should become cheaper as the proper proportions of the

amino acids required for the body is found, and a larger volume can be produced.

In recent literature it is possible to find articles which advocate irrigation of the peritoneal cavity with large amounts of saline until the returns are clear in the treatment of peritonitis. Such articles should certainly be expurgated from the literature. There is no scientific evidence to support such views, and there is definite proof that saline does hasten peritoneal absorption. Last but not least why tend to spread the infection already around to distant portions of the peritoneal cavity by the mechanical irrigation when nature is trying her best to wall off the existing infection. Such procedures should be condemned to the strongest terms possible.

The answer to lowering the mortality of acute appendicitis still remains the same. Early diagnosis, early operation, plus continued education of the public.

OBSERVATIONS ON THE EYES DURING INSULIN SHOCK TREATMENT*

Lyle S. Powell, M.D.

Lawrence, Kansas

Marshall E. Hyde, M.D.

John Russell, M.D.

Osawatomie, Kansas

This study reports the detailed observations on the eyes of patients during insulin shock treatment of Schizophrenia. This is one of a group of studies carried out for the observation, and determination in greater detail of the nature of the reactions from this form of treatment. The observations on the eyes are considered particularly pertinent because of the close communication and similarity of the ocular vascular supply and the blood supply of the brain and the fact that the retinal vessels may be directly observed.

SECTION A: OBSERVATIONS ON INSULIN PATIENTS

In the present study of the so-called insulin-shock therapy, the subjects were selected more or less at random except for the fact that an effort was made to obtain fairly cooperative patients. The program for the insulin-shock therapy was modified only in regard to the time of administration of the insulin,

*From the Department of Ophthalmology, Osawatomie State Hospital, Osawatomie, Kansas.

i.e., the insulin was administered between nine and ten o'clock in the morning instead of between six and seven o'clock in the morning as is the usual plan. Because of hospital routine this change made it possible to obtain detailed examinations of the eyes before the administration of the insulin. Except for this one variation, the program of treatment as identical with the program that has been carried on daily in this hospital on a considerable number of patients since June, 1937.

The observations made include temperature, pulse, respiration and blood pressure at frequent intervals. Observations on the eyes include any changes in conjunctival vessels and the external appearance of the eye, size of the pupil, reaction of pupil to light, intra-ocular tension (Bailliant—or Gradle-Schiotz as indicated) and ophthalmoscopic findings.

All observations pertaining to the eyes were made and recorded by the senior author who is the consulting ophthalmologist to the hospital. Observations on other reactions to the treatment were made by the other authors who are experienced in that form of therapy.

These findings were recorded in detail at the time of the study and are included in tabular form, being submitted in Tables I and II.

A brief resume of the insulin treatment prior to the day these observations were made is included for each patient immediately preceding each table.

A. McC., age twenty-three. First dose was sixteen units which was gradually increased to seventy-two units and treatment stopped in the excited period. As no improvement was noted in his mental condition, the duration of treatment was increased each day until the patient went into coma. The maximum dosage he received was ninety-six units. It was then gradually decreased to sixty-four units. For these observations, the patient received seventy-two units. He has received a total of forty-eight injections of insulin.

Usual Reaction: The patient passes gradually from a period of insomnia at the beginning of the treatment into one of restless stupor at the end of about three hours. This stupor passes gradually into coma. There is no tendency toward convulsions. Patient has shown gradual improvement from day to day while on treatment.

M. W., age twenty-four. The first dose was sixteen units. This was increased daily by sixteen units until sixty-four units were being given. Seventy-two units were then given and the patient went into coma and since then and inclusive of these observations, he has been in coma on six occasions, each time on a dosage of seventy-two to eighty units.

This patient passes thru a sleep period immediately

after injection of insulin, later becomes stuporous and then gradually passes into coma. He has shown no convulsive tendencies so far and recovers from the coma in fifteen to thirty minutes following sugar administration. He has shown definite improvement in his mental condition from day to day.

COMMENTS ON INSULIN HYPOGLYCEMIA

In considering insulin hypoglycemia, or insulin shock therapy, it seems necessary to comment on the terminology that is in common usage when discussing this plan of treatment. It is to be noted that the word "shock" is used in the fields of general medicine and surgery. In the latter there is an elevation of pulse rate, increased respiratory rate, drop in blood pressure, and no obvious effect on the central nervous system. In hypoglycemic shock there may be brady-cardia or the pulse is only moderately elevated, systolic and pulse pressure become elevated, and the central nervous system is affected as shown by loss of deep reflexes, occurrence of positive Babinski, and pupillary instability. Dr. Sakel describes shock as that state in which the stupor is so great that the patient cannot swallow fluids and therefore has to be tubed or given sugar solution intravenously. This stupor then passes into coma and during this stage there is usually a positive Babinski. Different workers demand different findings for this so-called shock. However, the usual conception is an arbitrary state in which the patient cannot swallow and the Babinski is positive. There may be a convulsion substitute for coma. It has also frequently been observed in many cases of deep coma that the Babinski remains negative.

With the injection of insulin there is a rapid drop in blood sugar—this being the lowest possibly one to one and one-half hours after injection. The drop in blood sugar is in itself not the cause of coma. With increasing dosage of insulin the blood sugar comes to a stage where it will not drop any further and yet with additional insulin the patient will go into coma. It has also been shown that during the period of deepest coma the blood sugar is rising. It appears that during coma there is a marked interaction between insulin and adrenalin, each reacting against the other. Some writers believe findings and results of insulin hypoglycemia are due to adrenalin which has been stimulated into action by the insulin. Whatever occurs during coma, which may possibly be a partial asphyxia of the central nervous system, the latter suffers a severe temporary jolt as reflexes become abolished and pathological reflexes appear.

The patients observed in this study went thru what is considered normal insulin shock-somnolent period, excitement, stupor, and then coma. The ac-

TABLE I
OBSERVATIONS DURING INSULIN SHOCK TREATMENT

Patient: A. McC. Age: 23.

The examining room was in semi-darkness during the examination.

TIME	T.	P.	R.	B. P.	PUPIL SIZE	*T. Br.	EYE OBSERVATIONS AND OTHER COMMENTS
8:00	96	56	10	106/80			Media are clear. Discs are normal. There is an unusual number of small retinal vessels and these are unusually tortuous for a man of this age. Sclera and conjunctiva clear.
9:34						17/17	
9:35					6 mm		
9:36	72 units of insulin						
9:40		76					
9:47	97.6	72	14				
10:05					6 mm	17/17	
10:35	96.4	82	16	114/70	7 mm	16/18	Sclera and conj. moderately suffused. Retinal veins congested.
10:38							Perfectly calm; says he feels sleepy.
10:41							No change.
10:47	96.4	88	14	112/60			
10:56					7 mm	17/19	
11:14	97	88	16	140/64			
11:22					OD 7 mm OS 7 mm	15/14	Entire fundus more pink; disc more pink. Temporal veins of left eye are very much engorged. Other veins both fundi more engorged also. General suffusion of both sclera and conjunctiva.
11:44	97.4	94	20	130/68	OD 7 mm OS 6 mm	Uncooperative	
12:15	96.6	76	16	120/70	3 mm		Fully conscious; responds to questions; very dry and feels sleepy, quiet; vessels of fundi unchanged since last observation.
12:20							Deep stupor, dry and a little restless and feels warm. Responds to external stimuli. Babinski is negative. Pupils very unstable.
12:38							Pupils continually dilating and contracting even under strong light. Jerking slightly; facial tremor; oral movements; deep stupor. Babinski negative.
12:40							General suffusion sclera and conj.—cornea anesthetic. Pupils do not react to light, but still unstable—vitreous hazy both eyes, worse right. Calibre of veins of left retina are smaller and not so dark in color. Arteries are more constricted and threadlike.
12:47	96.4	100	20	142/88			Eye findings same as above.
12:56					6 mm	15/20	Patient in coma; Babinski appears suggestive. Eyes unsteady and tension difficult to take. Deep coma.
1:00							Vessels beginning to resume normal ratio. Veins of left fundus still engorged, especially the inferior temporal. Both pupils unstable under the influence of direct light. Both anterior chambers are deeper than normal.
1:10							Patient elevated on back rest.
1:13	96.6	102	16				
1:20				150/90			
1:23					OD 6 mm OS 7 mm		Pupillary reaction unstable to light.
1:25							Veins of fundi still engorged. Arteries apparently normal size. Conjunctival injection persists.
1:27						30/28	
1:28							Babinski positive. Cornea sensitive.
1:37						22/32	
1:38					OD 5 mm OS 6 mm		Pupils still unstable.
1:39							Moderate congestion of conj. and sclera. Veins of fundi are very dark in color.
1:43							Both anterior chambers remain deeper than normal.
1:44	96.2	108	18	120/70			
1:53						28/27	Fundi seem entirely normal.
1:58						26/21	
2:04						25/18	
2:10						28/26	
2:15	96.4	96	16	130/80			

*Intraocular tension as estimated with Bailliant's Tonometer.

TIME	T.	P.	R.	B. P.	PUPIL SIZE	T. Br.	EYE OBSERVATIONS AND OTHER COMMENTS
2:20						20/25	
2:23					3 mm		Pupils small and still unstable under direct light.
2:24							Tubing started.
2:26							Tubing over.
2:34						20/20	Cornea still anesthetic.
2:45	96.2	120	18	120/70			Cornea not anesthetic. Patient is getting restless; stupor is getting lighter. Anterior chambers normal depth. Media clear.
3:15	97	100	16	128/80		20/20	Eye findings normal thruout except for slight suffusion of conjunctiva.

companying general physical findings are quite typical.

The eye findings commonly reported in the literature are injection of conjunctiva and abolition of pupillary reflex. No previous reports are at hand on changes in media, in the depth of the anterior chamber, on intra-ocular tension readings, on size of pupil, or changes in the retinal blood vessels. Mention of instability of pupil reflex has not been reported in available articles.

COMMENTS ON REACTIONS OBSERVED IN CASES SUBMITTED

A. McC.: One hour following the administration of insulin there was observed increased congestion of the retinal veins that was rather marked in degree associated with pupillary dilation of 1 mm. and accompanied by the usual marked decrease in temperature. One and three-fourths hours following insulin the discs were unusually pink but the retinal veins were still engorged. There was observed at this time the usual characteristic, definite increase in systolic pressure and decrease in diastolic pressure. Two and one-half hours following insulin administration there was present marked constriction of the pupil. At that time there was also observed a definite instability of irritability of the pupils in that they were alternately contracting and dilating. Three hours following administration of insulin the vitreous seemed quite hazy and at this time the arteries and veins were definitely constricted. Three and one-half hours following insulin, the vessels were beginning to assume their normal ratio, but there was still present marked engorgement of retinal veins. Marked deepening of both anterior chambers was noted at this time. Four hours following the administration of insulin, there was present a marked increase in intra-ocular tension. The pupils remained unstable or irritated. The temperature remained subnormal. The anterior chambers of each eye were still much deeper than normal and there was present marked congestion of retinal veins. Tension approached normal even before tubing was started and returned to the original level shortly following tubing.

M. W.: One hour following insulin there was present moderate suffusion of sclera and conjunctiva, marked congestion of retinal veins, dilation of the pupils amounting to 1 mms. and the usual drop in temperature. This amounted to about one degree at this time. One and one-half hours following insulin there occurred the onset of stupor accompanied rather marked increase in systolic pressure and decrease in diastolic pressure. There was 2 mm. dilation of the pupil at that time but no further change in eye grounds. Two and one-fourth hours following insulin there was present 3 mms. of pupillary dilation, a drop in temperature of two degrees, being 94.6 degrees, and blood pressure of 136/70 as compared to the original blood pressure of 112/76. There was present also a definite but moderate increase in intra-ocular tension, obvious deepening of the anterior chambers, definite haziness of the vitreous, and increased congestion of veins and arteries of the fundi of both eyes. The pupils were reactive to light but showed the instability that has been previously mentioned. Three hours following insulin administration, the intra-ocular veins were much engorged but both fundi were unusually pink. The pupils remained quite unstable. At the end of three and one-fourth hours there occurred an apparent relaxation of the retinal arteries. The arteries were the same size as the accompanying veins, which was true for both eyes. At the end of three and one-half hours both anterior chambers were still deeper than usual, there remained a marked increase in intra-ocular tension and the media were less hazy.

Sugar was administered shortly after the three and one-half hour interval and eleven minutes after the administration of sugar by stomach tube, fundi and media were perfectly normal, anterior chambers were of normal depth and the pupils reacted normally to light. The patient queried, "Where am I?" twelve minutes following sugar administration and was then able to answer questions but appeared dazed for seventeen minutes afterwards. Intra-ocular tension remained normal and ophthalmoscopic examination was negative for forty-five minutes following sugar administration.

TABLE II
OBSERVATIONS DURING INSULIN TREATMENT

Patient: MW. Age: 24.

Room was in semi-darkness during the examination.

TIME	T.	P.	R.	B. P.	PUPIL SIZE	T. Br.	EYE OBSERVATIONS AND OTHER COMMENTS
6:30	98.4	66	12	112/76	5 mm		
9:15							Eye grounds—Discs are small and round. Media are clear. Vessels have normal 3:2 ratio and are not unusual or pathological.
9:25						18/17	
9:28	80 units of insulin						
9:45	98	64	18				
9:58	97.6	56	24	130/64	5 mm	17/17	No change in eye grounds.
10:28	84				6 mm	17/17	Moderate suffusion of sclera and conjunctiva. Congestion of retinal veins both eyes.
10:32	97.6						
10:37							Becoming slightly agitated, asking for mother.
10:41							Beginning to perspire.
10:47	97.6	82	16	156/40			
10:50	97.4	94	20				
10:55					7 mm	17/17	No change in eye grounds.
11:10							Definite stupor.
11:15	97	100	22	150/68	7 mm	Uncoop.	No change in eye grounds.
11:45	96.4	95	20	136/70	8 mm	21/20	Very moist, deep stupor. Babinski negative; very quiet inactive stupor; appears to be in coma. Increased congestion of veins and arteries of both fundi. Definite haziness of vitreous, both eyes. L. vitreous is hazy but less than right. Definite deepening of anterior chamber both eyes. Pupils react to light, both eyes.
11:52							Moderate injection of conjunctival and sub-conjunctival vessels, esp. in upper half, both eyes.
11:54							In definite coma. Babinski positive. Salivating.
12:15	95.8	74	26	138/80	Rt. 5 mm Left 7 mm	25/30	Patient elevated to 50 degree angle. Pupils still react to light. Definitely more engorgement of retinal veins. In deep coma; is drying up. Quiet, inactive. Developing some respiratory difficulty. Pupils unstable and under the influence of strong light will dilate and contract in a haphazard fashion. Under the influence of light the margins of the iris seems to be under continual motion, either contracting or dilating, indicating instability of nervous control.
12:34							Entire fundus, both eyes, is unusually pink, including the disc. Veins very engorged and dark in color. Pupils observed dilated to capacity under strong light, then contract moderately in semi-darkness, in constant motion.
12:45	95.4	76	24	146/70	5 mm	32/28	Veins very engorged and dark in color. Arteries observed dilated same size as accompanying veins.
1:06						32/25	Veins are very dark, much more so than normal. Anterior chambers remain very deep. Media less hazy.
1:08							Tubing started.
1:10							Tubing over.
1:15						32/32 28/24	Schiotz, 1 weight Schiotz, 2 weights
1:18	96	112	15	140/82			
1:21					6 mm		Fundi and media perfectly normal. Pupils react normally to light. Ant. chambers normal depth.
1:22							Asks, "Where am I?"
1:24							Awake and answers questions.
1:27							Awake but dazed.
1:30					5 mm		Conjunctiva is clear both eyes. Pupils normal, fundi and media normal.
1:35						16/14	
1:45	97	78	18	110/66			
1:51						15/14	
2:07						18/20	
2:15	97.8	104	18	120/70			
2:45	97.8	96	24	124/68			
2:55						20/20	Eye findings normal thruout.

SUMMARY AND CONCLUSIONS ON INSULIN OBSERVATIONS

During the stupor and coma occurring in insulin shock therapy, there have been observed certain definite changes. These include an early, gradually progressive dilation of the pupils with retention of the reaction to light, but accompanied by a peculiar instability or irritability of the pupil in that it will alternately contract and dilate at certain periods of the stupor or coma.

There develops during the course of the reaction marked haziness of the vitreous which is transitory. The changes in the retinal circulation are suggestive of an acceleration of circulation in that the fundi are definitely more pink than usual. Retinal veins are consistently engorged and on at least one occasion there was an obvious relaxation of retinal arteries until they were about the same size as the retinal veins. Definite moderate to marked increase in intra-ocular tension occurs during insulin shock treatment but may subside spontaneously before sugar is administered.

The eye changes all subside promptly following administration of sugar solution and the recovery in this respect seems to be as rapid as in the case of the more obvious clinical aspects.

BISMUTH POISONING FROM BISMUTH (SUB-NITRATE) GIVEN ORALLY

Report of Case

James H. Bena, M.D.

Pittsburg, Kansas

Bismuth poisoning during the course of anti-leptic treatment is a fairly common observation. Similar manifestations also occur during the course of bismuth therapy by mouth, but are less widely known. Because of the severe symptoms which this patient presented it was thought that our findings would be of general interest. An abstract of a case by Dr. Tayloe¹ is presented in the Year Book of Pediatrics for 1938¹ to which the findings in our case are strikingly similar.

B. B.—a white female child, age three years, was seen for the first time on April 1st, 1939.

Chief complaints; general malaise, anorexia and semi-stupor for the past four days.

Father in an institution, said to be a paretic. There was no history of birth injury, former illness or developmental abnormality.

Immunization; diphtheria and typhoid fever.

Present illness; four days prior to admission patient and family had "greens" for their evening meal. No other unusual foods or substances had been taken. The next morning the patient vomited and had a mild diarrhea. One other member of the family had a mild diarrhea which cleared up spontaneously the same day.

The infant was given large doses of medicine (said to be bismuth) by mouth. Her diarrhea stopped the next morning but the vomiting became much more severe and patient developed a state of collapse. This progressed until the day prior to admission. Patient could not walk or talk and on the day of admission lost practically all voluntary motion. At no time had any fever been noted.

Examination showed a white female infant of about three years of age lying very quietly in bed. very stuporous but not comatose. Her eyes would follow her mother about room and she made some feeble effort to turn her head. Patient could not be made to talk but would cry briefly on strong painful stimulus. She would swallow when water was poured into mouth. The patient was moderately cyanotic especially about the lips.

Head; ears and eyes showed no abnormality.

Nose; slight mucoid discharge. Turbinates and nasal mucosa slightly engorged.

Mouth; dry with oral mucosa inflamed, mild gingivitis present. No black line was noted on gums and the pharynx was slightly inflamed.

Neck; no rigidity, no lymphadenopathy.

Chest; lungs clear, heart negative, rate 88.

Abdomen; showed moderate distention and the liver edge was four cm. below the costal margin. Spleen edge was barely palpable at costal margin.

Genitalia were normal.

Extremities; showed normal development with marked atonicity.

The abdominal reflexes could not be elicited and all other reflexes were markedly diminished. There was no response to stimulation by pin point. Patient would move only slightly when severely pinched.

Temperature was normal and remained so the entire time that the patient was in the hospital.

The blood was cherry red in color resembling mercurchrome and did not change in color on exposure to air. We felt this was due to the presence of methemoglobin. Unfortunately we were not able to do a spectroscopic examination.

A spinal puncture was performed on April 2nd. at which time 15 cc of clear spinal fluid was removed.

Specimens of blood, urine and stool were examined by Dr. Hecker at the Kansas State Teachers College. He reported finding large amounts of bis-

FINDINGS

Blood Count Admission	Blood Chemistry Second Day	SPINAL FLUID ADMISSION	U R I N E		
			Adm.	Third Day	Dis.
Blood Hb .....95%	Fasting Blood Sugar 115 mgm's %	Spinal Fluid	Albumin 3+	2+	Trace
R. B. C. ....4,650,000	Blood Kahn Negative	Cell Count—2	Sugar 0	0	0
W. B. C. ....9,500	N. P. N. ....30 mgm %	Sugar Present	Acetone 3+	0	0
Differential	Urea N. ....17 mgm %	Globulin—	W. B. C.	2-5	4-6
Poly .....88%		No Increase	10-15-H	H. P. F.	H. P. F.
Lymphs .....12%		Kahn—Negative	P. F.		
			R. B. C.	0	0
			2-5 H. P. F.		
			Hyalin and granular casts	6-8 H. P. F.	Occ.
			8-10 H. P. F.		

mouth in the stool and also in the urine. It was his impression that the methemoglobinemia was a result of the presence of bismuth nitrite in the bowel. This apparently occurs as a result of reduction of the nitrates to nitrites by bacterial action^{1,2}. Because of this we believe the metal given was probably the sub-nitrate.

Patient was given a transfusion of 200 cc of blood on each of two successive days. Transfusions were by indirect citrate method.

Patient was given five gr sodiumthiosulfate on April 2nd and seven and one-half gr sodiumthiosulfate on April 3rd, both intravenously. On the second day of treatment patient developed slight puffiness of the face and extremities which persisted for three days. The afternoon following the first transfusion there was marked diuresis with some reduction of the puffiness of the face.

One half ounce of saturated solution of magnesium sulphate was given by mouth on four successive days and enemata were given twice a day for three days.

Definite improvement was noted in the patient after three days when she began to make voluntary movements. Blood at this time was normal in appearance and slight change in color was noted on exposure. Urine at this time as shown on the chart was improved.

After five days hospitalization the patient was almost normal in her behavior, was eating well, talking and walking about her room. There was no trace of edema or puffiness. Physical examination at this time was entirely negative. Urine showed an occasional hyalin cast and five to ten W. B. C. per low power field, with no red blood cells. Patient was then dismissed with a good prognosis.

This case illustrates a rather severe form of toxic symptoms from an apparent idiosyncrasy to bismuth. Not only must symptoms of poisoning be watched for during anti-leucic therapy with bismuth but also when bismuth is given by mouth. The most common manifestation is nephritis. Symptoms resemble those

of mercury poisoning, however, the prognosis in bismuth poisoning is good as a rule, although deaths have been reported².

1. John C. Tayloe—Southern Med. and Surg. 100:62 Feb. 1938 Abs. in Year Book of Pediatrics Abt.—479-480: 1938.
2. Petterson-Haines and Webster—Legal Medicine and Toxicology 1926 Vol. 2 PP. 203-207.

MERALGIA PARESTHETICA FOLLOWING CHIGGER BITE*

Maurice A. Walker, M.D.

Kansas City, Kansas

A white girl, aged seventeen, received several chigger bites on her lower extremities and abdomen while on a picnic on July 4, 1938. Because of itching, she painted the lesions with full-strength lysol. Within three hours, numbness developed in the entire area innervated by the right lateral femoral cutaneous nerve.

She was first examined four days after the paresthesia began. She stated that the numbness had not varied much since its onset, but seemed to become more noticeable when she stood after having been seated for some time. There was frequently a desire to rub her thigh, after which she would experience a sensation of burning. There was some diminution of sensation to touch, pain, and heat in the area involved. Some of the chigger bites had disappeared. One of those remaining was three cm. in diameter, had deep underlying induration, and was located eight cm. beneath the right anterior superior iliac spine at the site where the nerve emerges through the fascia.

Her symptoms continued unchanged until about August 15. Then she noticed that the numbness was disappearing in the periphery of the area. This progressed rapidly, with complete return to normal sensation by September 1.

*Paresthesia of the lateral femoral cutaneous nerve is discussed in detail by A. D. Ecker and H. W. Woltman, J. A. M. A., 110:1650-1652 (May 14) 1938.

PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

No problem that confronts medicine is of more importance than the problem of public relationship. The best interest of both the public and the medical profession are to be served by a complete understanding between the profession and the public. This understanding is to be accomplished by education, both of the public and the profession. In exact proportion as the public is informed of the aims and ideals and accomplishments of the profession in that same proportion will the appreciation of the profession by the public be increased.

During the month of April of this year there will be accomplished the third annual enrollment of the Women's Field Army. The participation of the profession in this enrollment is bound to bring about a better understanding by the public of the aims and ideals of the profession. The Women's Field Army is an organization of women promoted by the American Society for the Control of Cancer. The Field Army has asked that the Medical Society assume full responsibility for the direction of the educational campaign which they are promoting. The State Society accepted this invitation and this responsibility. We are asking that every member of the State Society cooperate to the fullest possibility with these ladies in this effort.

All of the official leaders of the Women's Field Army have been instructed that they contact their respective county medical society and that these medical societies would furnish them speakers and would cooperate with them in every way in the furtherance of their educational campaign. When the officers of the county medical society are asked by the various units of the Women's Field Army for help in their various programs, the county medical society may designate some one of their own number to make the talks or they can communicate with the Cancer Committee of The Kansas Medical Society or the Society's central office in Topeka asking that an outside speaker be sent to them and this will be done. If a member of the local society has been selected, the Cancer Committee or the central office at Topeka will be glad to cooperate with the local member in the preparation of his talk. The central office has a number of packets that are available for loan to any member to aid him in the preparation of his talk.

In conclusion may I again urge that each of the county societies and each member of these various county societies lend all encouragement they can in the promotion of this enrollment that is to take place in April. It is a nation wide movement and we are anxious that the state of Kansas show favorably in comparison with other states. We are likewise anxious that The Kansas Medical Society and its component societies render as complete a service as is possible to this educational campaign.

Yours very truly,

C. C. NESSELRODE, M.D.

President

EDITORIAL

PERIODIC HEALTH EXAMINATIONS

Periodic health examinations have been advocated officially by organized medicine for several years. Every physician knows that a great deal of disease would be discovered early and a vast saving in physical and mental suffering would result if health examinations became an accepted practice. Knowing this full well the physicians throughout the country have not themselves accepted the idea with any manifest enthusiasm and few there are who take the pains to advocate it among their clientele. If the medical profession is not sold on the advantages of health examinations the public is not to be blamed for staying away from doctors until illness forces them to seek medical advice.

Busy physicians are well occupied with sick people. Patients coming to them for health examinations are regarded as of less importance than those who are ill. This is perhaps the reason why they make little or no effort to encourage apparently well people to apply for periodic examinations. If physicians are to do their full duty toward the community in which they practice they must go out of their way to teach preventive medicine and advocate health examinations. They should establish the habit of encouraging those who are under their care to return periodically. Particularly is it desirable that those beyond middle life and the advanced age group be encouraged to have periodic examinations.

When an individual requests an examination he is entitled to something more than a cursory physical check up. The first and most important phase of an examination is a carefully elicited and written history. The physical examination should be as thorough in an acquaintance whom the doctor has known for many years as in a patient coming to him for the first time. If errors are to be kept to a minimum nothing should be taken for granted. If a physician can use his eyes and ears and hands and possesses the ability to evaluate his findings he can save a good deal of expense to his patient by avoiding a considerable amount of unnecessary laboratory work.

The clinical laboratory, x-ray, basal metabolism and electro-cardiograph are all highly useful adjuncts to diagnosis, but superfluous examinations of this kind are often disappointing to the patient in the amount of accumulated costs and serve too often to keep the patient away from the doctor. All of these facilities should be brought into use when indicated. Good judgment in their employment reflects the wisdom and care of the physician.

If the medical profession can sell themselves on the idea of periodic health examinations the public will come to the acceptance of them as a routine necessity. Herein lies considerable possibility toward increasing the confidence of the public in legitimate medicine.

HOSPITAL PLAN

The following message in regard to construction of Hospitals in areas where they are needed was forwarded by the President to Congress on January 30th:

"Health and Welfare Activities—Message from the President of the United States (H. Doc. No. 604)

"The speaker laid before the House the following message from the President of the United States which was read by the Clerk and referred to the Committee on Interstate and Foreign Commerce, and ordered to be printed:

"To the Congress of the United States:

"In my special message to the Congress on January 23, 1939, I expressed my concern over the inequalities that exist among the States as to health services and resources with which to furnish such services. With that message I transmitted the report and recommendations on national health prepared by the Interdepartmental Committee to Coordinate Health and Welfare Activities and recommended it for careful study by the Congress.

"Conditions described a year ago are substantially unchanged today. There is still need for the Federal Government to participate in strengthening and increasing the health security of the Nation. Therefore I am glad to know that a committee of the Congress has already begun a careful study of health legislation. It is my hope that such study will be continued actively during the present session, looking

toward constructive action at the next. I have asked the Interdepartmental Committee to Coordinate Health and Welfare Activities to continue its studies.

"In order that at least a beginning may be made I now propose for the consideration of the Congress a program for the construction of small hospitals in needy areas of the country, especially in rural areas, not now provided with them. Hospitals are essential to physicians in giving modern medical service to the people. In many areas present hospital facilities are almost nonexistent. The most elementary health needs are not being met.

"The provision of hospitals in the areas to which I refer will greatly improve existing health services, attract competent doctors, and raise the standards of medical care in these communities. The new hospitals should serve the additional purpose of providing laboratory and other diagnostic facilities for the use of local physicians, as well as accommodations for local health departments.

"The proposed hospitals should be built only where they are most needed; they should not be constructed in communities where public or private institutions are already available to the people in need of service even if these institutions are not up to the highest standards. To insure proper location and good standards of operation, approval of hospital construction projects should be given by the Surgeon General of the Public Health Service, with the advice of an advisory council consisting of outstanding medical and scientific authorities who are expert in matters relating to hospital and other public-health services.

"Projects proposed for consideration should be submitted by responsible public authorities and should include assurance that adequate maintenance will be provided. Approval of projects should be preceded by careful survey of existing local hospital facilities and needs. Standards for organization, staff, and continuing operation should be established by the Surgeon General, with the advice of the advisory council. A competent hospital staff and satisfactory standards of service should be required, including medical, surgical, and maternity service. When indicated, special provisions should be made for the care of the tuberculous. In many areas of the South

the present acute needs for the care of Negro patients should also be met.

"I suggest that these hospitals be simple, functional structures, utilizing inexpensive materials and construction methods. The facilities of the Federal Works Agency should be utilized in the planning and execution of the hospital projects. Title to these institutions should be held by the Federal Government, but operation should be a local financial responsibility.

I recommend to the Congress that enabling legislation for this program be enacted and that a sum of between \$7,500,000 and \$10,000,000 be appropriated to the Public Health Service to inaugurate the program during the next fiscal year.

I am confident that even this limited undertaking will bring substantial returns in the saving of lives, rehabilitation of workers, and increased health and vigor of the people.

"This suggestion is not a renewal of a public-works program through the method of grants-in-aid. The areas which I have in mind are areas so poor that they cannot raise their share of the cost of building and equipping a hospital. Yet I believe that many of such communities have enough public-spirited citizens with means, and enough citizens able to pay something for hospital treatment, to care for operating costs of a hospital, provided they do not have to pay for its original construction and equipment, or to pay annual interest and amortization on borrowed money. Treatment in such a hospital would, of course, be available to men, women, and children who literally can afford to contribute little or nothing toward their treatment.

"One of the important difficulties in such areas at the present time is that young doctors hesitate to practice general medicine or surgery because of the utter lack of hospital or laboratory facilities. One cannot blame them.

"In such areas also costs of construction are generally low and many local materials can be used. It is my belief that with the assistance of the Work Projects Administration the cost of building and equipping a hundred-bed hospital can be kept down to between \$150,000 and \$200,000. This means that we could build 50 such hospitals for between \$7,500,000 and \$10,000,000.

This is not an ambitious project. This principle should not be extended to Government gifts to communities which are financially able to build their own hospitals. It is an experiment in the sense that the Nation will gain much experience by undertaking such a project.

"At the very least it will save lives and improve health in those parts of the Nation which need this most and can afford it least.

"Franklin D. Roosevelt.

"The White House, January 30, 1940."

On February 1st Senator Wagner of New York and Representative Lea of California introduced the following measure respectively in the Senate and the House ("S. 3230 and H. R. 8240") which is intended to serve as an enabling act for the President's recommendation.

A BILL

"To promote the national health and welfare through appropriation of funds for the construction of hospitals.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the 'National Hospital Act of 1940.'

"SEC. 2. For the purpose of assisting States, counties, health or hospital districts, and other political subdivisions of the States in providing better health and medical services through the provision of needed hospital facilities to serve rural communities and economically depressed areas, there is hereby authorized to be appropriated to the Public Health Service for the fiscal year ending June 30, 1941, the sum of \$10,000,000 and for each fiscal year thereafter such sums as the Congress may deem necessary for carrying out the purposes of this Act. Amounts appropriated under this Act shall be available until expended.

"SEC. 3. States, counties, cities, other political subdivisions or parts thereof alone or in combination wishing to participate in the benefits contemplated by this Act shall make application to the Surgeon General of the Public Health Service (hereinafter referred to as the Surgeon General). Said applications shall contain information necessary to establish the existence of need for hospitals, to give assurance acceptable to the Surgeon General that

such hospitals will be made available under appropriate conditions to all groups of the population, will be maintained in good repair, and will be utilized in furnishing service of satisfactory quality, in accordance with regulations hereinafter authorized to be prescribed.

"SEC. 4. There is hereby established the National Advisory Hospital Council (hereinafter referred to as the "Council") to consist of the Surgeon General as chairman and six members to be appointed by the Surgeon General with the approval of the Federal Security Administrator. The six appointed members shall be selected from leading medical or scientific authorities who are outstanding in matters pertaining to hospitals and other public health services. Each appointed member shall hold office for a term of three years except that (1) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and (2) the terms of office of the members first taking office shall expire, as designated by the Surgeon General at the time of appointment, two at the end of the first year, two at the end of the second year, and two at the end of the third year after the date of the first meeting of the Council. No appointed member shall be eligible to serve continuously for more than three years but shall be eligible for reappointment if he has not served as a member of the Council at any time within twelve months immediately preceding his reappointment. Each appointed member shall receive compensation at the rate of \$25 per day during the time spent in attending meetings of the Council and for the time devoted to official business of the Council under this Act, and actual and necessary traveling and subsistence expenses while away from his place of residence upon official business under this Act.

"SEC. 5. The Council is authorized to advise the Surgeon General with reference to the carrying out of the provisions of this Act, including—

(a) The review of applications for hospitals submitted in accordance with and meeting the requirements of section 2 and recommendation of such projects as in its opinion are needed, will be adequately maintained, and otherwise will fulfill the requirements of this Act;

(b) The formulation of standards which are necessary to insure proper conduct of the hospitals and care of persons served by the hospitals;

(c) The formulation of rules and regulations necessary to carry out the provisions of this Act;

(d) The review of reports and inspections, and when necessary, the making of inspections, with reference to professional service and standards of maintenance of the hospitals.

"SEC. 6. In carrying out the purposes of this Act, the Surgeon General is authorized and directed, after consultation with the Council—

(a) To conduct, assist, and foster studies and surveys with respect to needs for hospitalization and problems of hospital operation;

(a) To approve hospital projects to designate the location, type, equipment, and size of hospitals, and to allocate available funds to such approved projects;

(c) To provide training and instruction of personnel who will be required in connection with the hospitals;

(d) To cooperate with State and local health and welfare authorities and with professional agencies;

(e) To secure reports and to make inspections with respect to professional service and standards of maintenance of the hospitals and other matters pertinent to carrying out the purposes of this Act;

(f) To adopt such additional means as may be found necessary or appropriate to carry out the provisions of this Act, including the safeguarding of the quality of service furnished in hospitals;

(g) To make, with the approval of the Federal Security Administrator, such rules and regulations as may be necessary to carry out the provisions of this Act;

(h) To lease hospital projects when completed to the applicant for an indefinite period, the consideration for such lease being the maintenance and operation of said hospital in accordance with the provisions of this Act. If at any time said maintenance and operation by the applicant shall fail to meet such provisions, the lease shall be terminated by the Surgeon General on six months' notice.

"SEC. 7. When a hospital project has been approved by the Surgeon General, in accordance with the provisions of this Act, it shall be certified by the Federal Security Administrator to the Federal Works

Agency for construction and there shall be allocated and transferred to the Federal Works Agency, out of funds appropriated pursuant to this Act, so much of the appropriation as may be determined to be available for the project, and the Federal Works Agency is authorized to expend such sums for the planning, execution, and construction of the project and pertinent facilities, including administrative expenses, site acquisition, the preparation of working drawings and specifications, award of all necessary contracts and supervision of construction; and the Federal Works Agency is further authorized to expend out of appropriations available to it in accordance with the purposes thereof, such sums as may be necessary for the completion of the project, but without regard to specific limitations imposed on the use thereof. Title to the properties so constructed, and to the equipment installed therein, and to the land upon which they are located, shall be in the United States.

"SEC. 8. The Federal Security Administrator is authorized to accept on behalf of the United States gifts of money, equipment, and land to be utilized in carrying out the purposes of this Act.

"SEC. 9. The President is authorized to allocate from funds appropriated pursuant to this Act, for the fiscal year ending June 30, 1941, a sum for all necessary expenses of the Public Health Service in administering the provisions of this Act, including the training of personnel; and there is hereby authorized to be appropriated in each succeeding fiscal year such amounts as the Congress may deem necessary for such purpose.

"SEC. 10. (a) There is hereby authorized to be appointed in the Public Health Service, in accordance with applicable law, such additional commissioned officers and other personnel as may be necessary in carrying out the provisions of this Act.

(b) On recommendation of the Surgeon General, the Federal Security Administrator shall submit to the Bureau of the Budget on or before September 15 of each year a list of approved hospital projects under this Act and cost estimates thereof, together with such other data as may be necessary for the preparation of the budget estimates.

(c) This Act shall not be construed as superseding or limiting (1) the functions, under any

other Act, of the Public Health Service or any other agency of the United States relating to the prevention, diagnosis, and treatment of disease; or (2) the expenditure of money therefor.

(d) The term "State" as used in this Act shall include also the Territories and insular possessions of the United States.

(e) The term "hospital" as used in this Act shall include the physical facilities necessary for the prevention, diagnosis, or treatment of disease, and for the protection of the public health.

(f) The Surgeon General shall include in his annual report for transmission to Congress a full report of the administration of the Act, including a detailed statement of receipts and disbursements.

(g) This Act shall take effect thirty days after the date of its enactment."

Numerous comments have appeared on the President's messages in the press and in lay and professional periodicals and interestingly enough almost all of these comments have been nearly identical. Of particular interest, to the Kansas profession and one in which we believe the medical profession universally subscribes, is the following comment which appeared in the January 31st issue of the *Kansas City Star*.

"HOSPITALS WHERE NEEDED—ONLY"

"If federal money is going to be used for any public welfare purpose then there could be no just complaint over the use of a moderate sum for hospitals in remote areas now without these health facilities and unable to provide them.

The principle to be observed here is that nothing be undertaken save on a showing of urgent need, that the projects be kept wholly in the hands of health authorities and physicians and that a very modest program shall not be allowed to become simply a start toward such gigantic expenditures for hospitals and numerous other purposes as set forth in the Wagner health bill.

Mr. Roosevelt's hospital proposal now laid before Congress could easily be made such a beginning, but it is assumed this would not be possible with the present Congress and that in the future the question could be dealt with on its merits. The proposal carries the requested expenditure of seven and one-

half to ten million dollars for about fifty 100-bed hospitals to cost \$150,000 to \$200,000 each.

This does not require any expenditure in excess of the budget nor should it mean any interference whatever with the economy Congress seems to be striving desperately to attain. Even the reduced WPA appropriation is expected to be at least one billion dollars and still other public works funds will be going out under any conditions.

A small part of this money simply can be diverted from other uses—such as roads, sewers, recreation and the like—and applied to the hospitals, relief labor being used as on the other projects. The difference would be that the local communities themselves would not be required to put up any of the money save what would be needed for maintenance.

The hospital plan first was announced some weeks ago, and hardly a word has been heard in protest. But, once more, that is on the assumption that it will be what it announced to be and not something else."

MEDICAL ECONOMICS

MEDICAL CARE SURVEY

The Bureau of Medical Economics of the American Medical Association recently published a summary of the Survey of Medical Care in the United States conducted by the Association during the year 1938. The survey was based upon reports and questionnaires compiled by state medical societies, county medical societies, public welfare agencies, school agencies, public health agencies, hospitals, and by individual, pharmacists, dentists, and physicians. The summary presents a recapitulation of the information obtained from the individual reports and questionnaires. Likewise several pages are devoted to each of the various states which furnished information. The Kansas section is as follows:

KANSAS

The Kansas Medical Society has for several years worked in close cooperation with all other organizations concerned with medical care. It maintains a committee on allied groups which is charged with coordinating functions of that kind. It assisted the American Society for the Control of Cancer in the conduct of a cancer survey.¹ It has a very active Committee on the Control of Tuberculosis that has sponsored a case finding campaign.²

Its Committee on Conservation of Eyesight established and has assisted materially in the Kansas State Board of

Social Welfare medical blind program. Its Committee on Automobile Accidents cooperates with the Kansas State Highway Commission in various programs on this subject. Its Committee on the Control of Cancer is one of the oldest committees of that kind in the country and provides extensive lay and professional programs on malignant disease.

Its Committee on Hospital Survey studies needed equipment in hospitals and makes recommendations on economic use of present equipment. This year thirty incubators were placed in Kansas hospitals through efforts of that committee in cooperation with the Kansas State Board of Health. Its Committee on Maternal and Child Welfare in cooperation with the Kansas State Board of Health engages extensively in post-graduate and other programs. That committee at the present time is also working on state-wide immunization and vaccination programs. Its Committee on Medical Schools coordinates the services of the University of Kansas School of Medicine with Kansas needs and the Kansas medical profession.

Its Committee on Pharmacy cooperates with the pharmaceutical profession on many matters of public health interest. Its Public Health and Education Committee is active in many fields of lay education. Its Committee on Scientific Work coordinates post-graduate activities, and keeps the Kansas profession informed on new discoveries, new procedures, epidemics, increases in morbidity and mortality, etc. Its Committee on the Study of Heart Disease presents post-graduate courses on that subject, and at present is standardizing heart disease reporting in Kansas. Its Committee on Venereal Disease in cooperation with the Kansas State Board of Health has established several clinics and provides post-graduate training.

The Kansas State Board of Health is composed of nine physicians and one attorney and has always worked in close cooperation with the Kansas Medical Society. The State Board of Health is engaged in the following programs:

1. Preventive medicine—provision of toxoid and small-pox vaccine without cost to physicians; the sponsorship of a considerable number of county immunization projects for the control of diphtheria and smallpox; publicity of preventive medicine and cooperation with the Kansas profession in this regard.

2. Health education of the public—The Kansas State Board of Health publishes a weekly news release on health topics, it presents occasional radio addresses on similar subjects in addition to a number of manuals and pamphlets, and it provides some lay talks under guidance of county medical societies.

3. Demonstration clinics—the only demonstration clinics conducted by the State Board of Health in this state pertain to tuberculosis.

4. Laboratory facilities—Kansas has two state laboratories, one at Parsons and one at Topeka.

5. Arsenicals and bismuth for the treatment of syphilis are furnished without cost to doctors of medicine.

6. Vital statistics—the Division of Vital Statistics of the Kansas State Board of Health attempts to compile morbidity and mortality figures on all types of sickness and injuries; the majority of its information is obtained from death certificates, birth certificates, and from reports submitted by physicians.

Several volunteer agencies also cooperate with the State Board of Health and the State Medical Society; these include the Crippled Children's Commission, the Red Cross, the Kansas Tuberculosis and Health Association, the American Legion, civic clubs, certain lodges and churches. This cooperation is usually unofficial and in close connection with state and county medical societies. Attention

is called to these relations because they are all parts of a highly developed program of medical care, involving an harmonious effort of all agencies concerned.

The Committee on Medical Economics of the Kansas State Medical Society has assisted in securing uniformity and efficiency of county medical society plans for the care of the indigent. This work has been carried on in cooperation with the state and county boards of social welfare.³ Approximately sixty-five of the 105 counties in the state now have free choice indigent medical care plans. A report in *The Journal of the American Medical Association* 110:230B (June 11) 1938 on the Kansas Social Welfare Law is as follows:

The Kansas Social Welfare Law passed in 1936 contains the following provision:

The State Board of Social Welfare shall cooperate with the county boards of social welfare in establishing plans financed by county funds for provision of medical care to needy persons.

This clause was inserted in the law by the medical profession with the thought that it would tend to provide the benefits of local methods rather than a single method for the entire state and that at the same time the state board would be able to further efforts in this direction.

A committee composed of county commissioners, county welfare directors and physicians was recently appointed by the State Board of Social Welfare to make recommendations on indigent medical care in Kansas. After completion of extensive studies, the committee made the following recommendation:

"Resolved, That in the opinion of this committee the most feasible and desirable county plan for supplying medical care to public assistance recipients is by means of a contract between the county board of social welfare and the members of the county medical society organization, collectively or individually; the physicians included in the contract to be compensated for their services on a lump sum or controlled fee schedule basis by the county board of social welfare."

In the discussion of the problems, it had become apparent to all that many of the difficulties associated with the giving of medical care to recipients could easily be eliminated if a liaison committee of physicians was appointed in each county.

If this were done the county board of social welfare could discuss the medical problems with a group well qualified to discuss the medical aspects of the program, and the physicians would have a committee which could discuss with the county board of social welfare administrative and social welfare problems about which they had questions. With this in mind, the committee passed the following resolution:

"Resolved, That in the opinion of this committee the effectiveness of any county medical plan or program can be increased by the establishment of a committee of physicians selected by the medical society which can function as a liaison committee between the county board of social welfare the physicians practicing medicine within the county."

The committee concluded the meeting with a request that the state board prepare and publish the material gathered for the committee and send copies of the bulletin to all concerned, with the distinct understanding that the report was to represent the viewpoints and attitudes of the committee and not necessarily that of any official organization with whom any of the members might be associated. Representatives of the medical profession have held many conferences with representatives of the board in an effort

to have the provision adopted as an early part of the state welfare program. The Sedgwick County Medical Society has a medical service bureau to provide medical service for nonrelief, low income wage earners.

In a recent survey of the twenty-five leading causes of death in the past twenty-five years in Kansas it was found that almost without exception substantial decreases had been recorded.

With this general coordinated program as a background, the American Medical Association survey was conducted in twenty counties with 488,255 population. This population was composed of 224,811 urban and 263,444 rural residents. Within the territory covered by these counties, forms were sent to 519 physicians and dentists. One hundred eighty-three were returned. The returns from hospitals, nurses, health departments and others represented a much high percentage of the forms sent out.

The summary prepared by the Kansas Medical Society stated that there were six counties in Kansas with a population of more than 2,000 per physician. A map which accompanied the returns showed that these were practically all in the dust bowl section of the state in which the population has been generally declining for the last few years. Twenty-nine counties contained no hospitals registered by the American Medical Association. However, some of these counties have small hospitals which serve all needs not served elsewhere. In a recent survey, the society's committee on hospital survey found only three counties which felt hospitals were needed. There were three counties where full time physicians had been hired to care for the indigent. They are permitted to practice privately if time permits. There are also a number of counties where a part time salary, fees or other compensation is paid to individual physicians for indigent medical care.

The University of Kansas Hospital, located in Kansas City, Kansas, with a bed capacity of 300 receives indigent patients from any part of the state. The conditions under which these are received are explained in a letter from Dr. H. R. Wahl, Dean of the school. He says:

"Clinical patients, that is, those who do not pay a professional fee but pay the hospital charges are sent into the hospital upon request from the family physician, or by passing through the Social Service Department, receiving its approval. The Social Service Department goes into the financial status of every applicant very carefully in making their arrangements for admission into the hospital. Eighty-five per cent of the beds in the hospital are occupied either by indigent patients or by patients who do not pay the doctor's fee but pay the hospital charges; the latter group is known as clinical patients, and come in, as I have stated, either through Social Service or by letters from their family doctor requesting us to admit the patients under this category. I should also add that these letters from the doctors go through the Social Service Department, and are almost always honored by this department. The only exceptions are those when patients want special services, and the Social Service Department finds that the patients can easily afford to pay the physician's professional fee even though the family doctor has recommended them for clinical care. These cases are, of course, rare exceptions.

"We do not feel the capacity anywhere near meets the demands of the services being rendered. We are asking for some enlargement of our plant to increase some of the facilities. The equipping of the new units recently erected will add at least fifty beds to our present capacity. We have a program of eventually increasing the hospital to 550 beds."

The secretary of the state medical society expresses his belief that it is the general medical opinion in Kansas that local hospitals could care for the indigent sick more economically than at a central institution.

There has been some overcrowding at the State Sanatorium for Tuberculosis, but an addition has recently been constructed which increased the bed capacity to 600. Several other municipal and county tuberculosis sanatoria are maintained in the state. A new addition was also recently completed at one of the mental and nervous disease institutions. The institutions for the blind, deaf and dumb, epileptic and feeble-minded may be considered as reasonably adequate.

The 183 physicians replying on the forms provided in this study stated that they had cared for 28,919 persons without charge during the past year, 1937. This is about five per cent of the population of the district covered. These same physicians gave 2,733 free hours in clinics and dispensaries. It must be remembered that there are many counties in which there are no out-patient departments or clinics. Hospitals in ten counties reported that they had cared for 1,153 patients as public charges and 2,998 for whom they received no pay.

Reports were received from sixty-seven pharmacists who filled 1,628 prescriptions free of charge and 6,193 at reduced prices.

A welfare agency in one county reported that there were 250 persons who needed medical care but did not receive it. An explanatory note stated that these were persons who had been offered immunization free but had refused it. In another county it was reported that there was a lack of dental care, and several reported that defects discovered in school examinations had not been corrected owing to the neglect or the opposition of parents.

It must be remembered in connection with this study, that Kansas probably has at least as large a percentage of cult practitioners as any state east of the Rockies. A map which accompanied the survey gives the number of institutions operated by cult organizations, and shows that these are apparently more numerous than in other states.

There was a total of 398 forms returned of which, as has already been mentioned, 183 were returned by physicians and dentists. Two facts should be kept in mind in considering the comments received: first, the total number of comments was a small proportion of the number of forms received, and second, the majority of the returns came from sources other than physicians and dentists. As in nearly every other state, there were more comments to the effect that the medical situation was satisfactory than of any other type. There were eight sources of this statement; four of these were physicians, two of them pharmacists, one a health department, and one a school. There were five comments to the effect that more care was needed for the low income classes, three of which suggested the establishment of clinics. Three other sources stated that better arrangements should be made for the care of the indigent. Only seven sources suggested any type of insurance; of these three came from physicians, one from a nurse, one from a hospital, one from a welfare agent, and one from a pharmacist. From three sources came the statement that more public health work or the creation of new public health departments was necessary. There were several miscellaneous suggestions from individuals, such as "national assistance managed by local medical societies," "compulsory immunization," "full time county health nurse," and "a county hospital."

CANCER CONTROL

CANCER QUACKS

C. Alexander Hellwig, M.D.

Wichita, Kansas

"Doctor, where can I get \$500 for having my mother cured of cancer?" the elevator operator of a large hospital in Wichita recently asked me. A man who comes daily in contact with competent surgeons and radiologists told me the following story. His mother had been treated during the last two years for breast cancer by a well known Kansas cancer quack. After having spent \$750, she had been told that she needed one more treatment to get completely cured. However, the "doctor" could not do anything before receiving \$500.

Never have I felt the urgent need for lay education more than during this conversation. The quack who treats pains in the back is relatively harmless, because rheumatism is seldom fatal. The cancer quack, on the other hand, treats a disease which will inevitably kill the patient if it is not properly handled. The cancer quack never cures any but small skin cancers and certainly takes all of the victim's money, for the quack never treats anyone free.

It is our daily experience that patients come to the Sedgwick County Tumor Clinic after all hope is gone and all money has been wasted on fake cures.

The disastrous results of the cancer quacks' activities are well illustrated by the pictures taken in our cancer clinic. They are due to the application of caustic cancer paste which takes off the surface of the cancerous tissue, without preventing extension of the growth into the deeper structures. In many instances the paste itself is largely responsible for the victim's untimely death.

The American Medical Association has published a pamphlet entitled "Cancer Cures and Treatments," describing some forty cancer cures offered to the American people since 1900. Were they not so tragic in their import to the patients, the names and



Fig. 1.—Cancer of the lip after treatment with cancer paste, by cancer quack. In spite of great defect produced by the paste, the biopsy showed active squamous cell carcinoma. Patient died six months later on extensive metastases in the lungs.

Fig. 2.—One of the few cancer cures by cancer paste. A small basal cell carcinoma in front of ear, healed with great scar and disfigurement. Patient is unable to close the eye and suffers from corneal ulcers.

intents of the cures might sound amusing. There is one remedy said to be derived from a "mysterious plant" which is claimed to be the "only infallible cure ever discovered for cancer." There is, also, a "cure" which consists mainly of baking soda; one consisting of a solution of saltpeter; and many others of similar content.

The introduction of radium gave rise to a half dozen radium quackeries. In 1932 a company in New Jersey marketed an alleged radium treatment which was endorsed by an evasive Hungarian University professor. A company in Colorado incorporated for \$1,000,000, exploited several claimed radium preparations, one having Limburger cheese in the form of poultices. The advertising for the

BIBLIOGRAPHY FOR MEDICAL CARE SURVEY

1. Rector, Frank L.: Cancer Survey of Kansas, Jr. Kansas Med. Soc. 35:253-266, 300-324, 343-362 (July, Aug. & Sept.) 1934.
2. Bulletins issued by the Committee on Control of Tuberculosis, Jr. Kansas Med. Soc. 39:118 (March) 1938.
3. Medical Assistance in Kansas—A Report to the State Advisory Committee on Medical Care for Public Assistance Recipients with the Recommendations of the Committee, Research Study No. 4, May, 1938, prepared by Div. of Research and Statistics, State Board of Social Welfare in Kansas.

latter states: "A person who has a weak constitution ... should never use the Limburger cheese as a poultice, as it is too powerful a magnet."

Cancer remedies offered to the general practitioner resort to impressive language. A practitioner in Michigan offers a synthetic anti-toxin which in glowing terms is said to "cure cancer". It is interesting to note that the addition of the term "synthetic" to the term "anti-toxin" exempts the product from inspection under the Federal Virus, Serum, and Anti-Toxin act. In attempting to sell this anti-toxin to physicians, the manufacturer specifies that the fee shall not be less than \$300 for the first and \$200 for subsequent treatments. The other day a lady called me up by telephone and told me that her sister who lives in Cleveland had been treated with this serum. After having spent \$500, she had been told by the "cancer specialist" that she had Hodgkin's disease and that there was no hope for her. I advised her to have her sister examined by a competent physician. There it was found that she did not have Hodgkin's disease, and that her only trouble was a chronic cholecystitis.

The cancer institutes of dubious repute attract patients by the old claim to "cure cancer without the knife." Most of these concerns resort to the ancient treatment of cautery. Caustic disfiguring concoctions are poured and plastered on the "cancer." If the disease is really cancer, the patient is almost certainly doomed to death. Yet, recently, an institution in a neighboring state which uses this method almost exclusively, reported cash receipts of \$201,600.

Written testimonials from "cured" patients play an important role in the business methods of the cancer quack. They cannot be taken at face value, for most of these charlatans are not capable of making a correct diagnosis, nor do they want to make one. They treat many cases of simple ulcer or swellings which are not cancer, and when the condition is healed they advertise that they have cured a cancer. A fine example of the worthlessness of such testimonials is illustrated by the following letter which appeared in an advertisement published recently by a Kansas cancer practitioner:

Neodesha, Kansas, November 14, 1933.

I wish to state that I had cancers of the mouth, on lips and tongue. I was treated at Rochester, Minn., for six weeks with radium which was a complete failure. I then went to of, Kans. Mr. has treated me about five weeks. I am now going home and I believe my cancers are entirely killed.

(Signed)
Oklahoma.

Witness:
....., Pawhuska, Okla., his nurse.

The office of The Kansas Medical Society investigated this case and was informed by the wife of the patient that she did not believe her husband signed a statement of this kind, that he was not satisfied with the treatment received at the Kansas institution, that she believed the treatment aggravated his con-

Fig. 3.—Effect of cancer paste. Amputation of three toes. Patient was told by reputable physician that he had athlete's foot. He did not believe him, but went to "cancer specialist" who made the diagnosis of cancer.

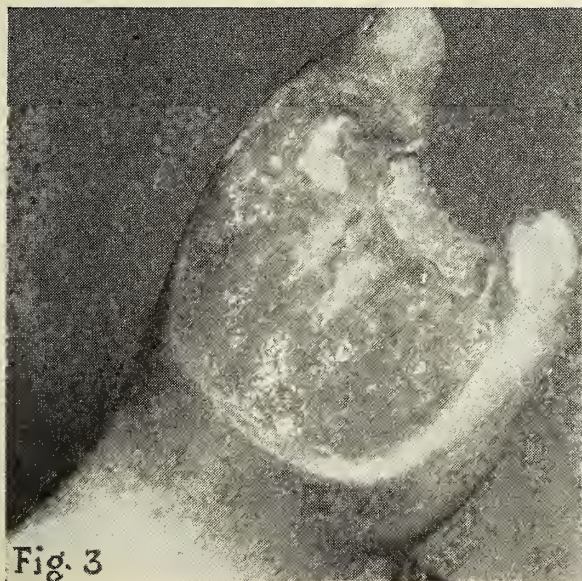


Fig. 3

Fig. 4.—Effect of cancer paste on breast. Necrosis of skin. Patient consulted physician few days after application of paste by cancer quack. The pain was unbearable. By histologic examination no cancer was found in the breast.

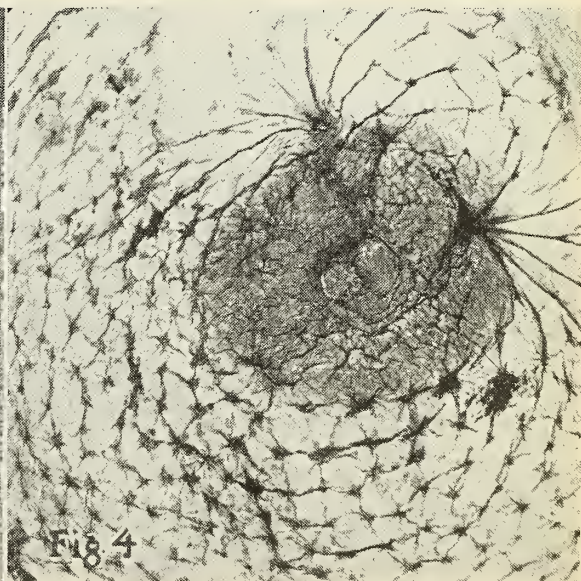


Fig. 4

dition, and that her husband died on December 16, 1933.

The American Society for the Control of Cancer, some years ago, offered a prize to be given to the one who first developed a cure for cancer. There were 2,500 applicants. The letters of entry described mixtures developed by an Indian squaw, an old herb doctor, a blacksmith and many others of similar scientific status. In every instance, the claim was made that the method had worked successfully in hundreds of cases personally known to the inventor. Not one of the 2,500 cures offered was worth the paper on which it was printed. A contribution forwarded from Kansas, reads as follows:

"Dear sir: I am not a student nor a doctor but if you stack up 3 million dollars so it is mine when the cancer is cured, bring on your man or woman I do not care how bad there ate up if the flesh is all gone off arm or leg or grate holes eat out but take a cancer when it is as big as half dollar it wont make a bad show dear surs I am ready to go to work Bring the patient and check put it in the Bank so it is mine when cancer is cured. answer at once."

It cannot be denied that the physician himself by honest but ill advised frankness may drive the cancer patient into the greedy arms of the quack. The physician who bluntly tells a patient there is no hope of a cure, overestimates, in most cases, human nature.

My teacher in surgery, Dr. Schmieden of Frankfurt, would never use the word "cancer" in explaining to a patient that he had a malignant growth. When I came to this country and expressed my astonishment about the frankness with which physicians pronounced the death sentence to inoperable cancer patients, I was ridiculed and told that Americans have enough courage to stand the truth. A physician who was especially emphatic in this attitude has today a cancer himself. He is looking for any ray of hope and, in that effort has convinced himself that he does not have a cancer, but instead a special form of tumor, very sensitive to radiation. An outstanding surgeon acquaintance of mine had an exploratory operation in a well known clinic and had been informed that he had a far advanced stomach cancer and could not expect to live longer than six months. He returned home, broken in body and spirit. He asked me, in his despair, what I thought of the cancer serum treatment.

A prominent business man of our town had been operated for intestinal cancer. Several months later he consulted a physician, because he developed jaundice. He was told that he had metastases in the liver and that nothing could be done for him. He went

immediately to a cancer institution in a neighboring state for treatment, and after he returned home the fame of that institution spread rapidly through Wichita because the patient had lost his yellow color.

Neither do I believe it helps in the fight against the cancer quack when a prominent surgeon goes about, telling that he has never cured a certain type of cancer and that anyone who claims a cure must have made a wrong diagnosis. There are several explanations for discrepancies of this kind between the opinions of physicians. Perhaps, the most plausible one is that the physician has operated only patients in the very latest stages. The effect of such a pessimistic statement on the part of the physicians who see only a few cancer cases a year and on the public cannot be underestimated. Many physicians and all lay people regard cancer as a single disease, a view which is, of course, entirely wrong.

Under the general term "cancer" have been grouped a great variety of clinical diseases which differ widely in clinical course, prognosis, and radio-sensitivity. Even in the same organ, as in the breast, "cancer" may be of the inflammatory variety which spreads, regardless of treatment, and kills in a few months, and on the other hand, may be of the "colloid type" which may go on for years and never cause metastases. As long as the laity does not know there are many clinical entities in the field of "cancer", I believe it is unwise to use the term "cancer" before a patient.

A well known surgeon said once that the medical profession will never succeed in stopping cancer quackery until laboratory research has given the physician therapeutic and preventive weapons as effective against cancer as those we have today against diphtheria. It is true that there are no quacks for treating diphtheria.

However, I believe our attitude should be less pessimistic, even under present conditions. If all available methods of detection, diagnosis, surgery, and radiation were to be brought to universal use, half of the present annual toll of 150,000 cancer deaths in the United States could be avoided, according to the foremost cancer students in this country.

Likewise, to aid in this achievement, all possible effort must be given to the extinguishment of the cancer quack.

Considerable attention is paid to the infection of children by tuberculous teachers but the question of the infection of children by domestic servants has received little attention. The prevention of first infection tuberculosis involves the examination of domestics in homes where there are children. Teschendorff, V., Deut. Tuber. Blatt, 1938 and Bul. Hyg., June, 1939.

EYE, EAR, NOSE & THROAT

ORBITAL CELLULITIS TREATED WITH SULFANILAMIDE

H. L. Kirkpatrick, M.D.

Topeka, Kansas

Orbital cellulitis has always been considered a serious condition. Serious damage to the eye has resulted in a large percentage of cases. In scanning records previous to the introduction of sulfanilamide and its cousin sulfapyridine, one is impressed by the frequency of corneal scars and even optic atrophy following a typical orbital cellulitis. One is also impressed by the number of unsuccessful incisions for drainage, by that I mean no drainage was established and the incision apparently had no influence on the course of the disease, unless perhaps to make it worse.

Three recent cases are presented, two of which were treated with sulfanilamide and one with sulfapyridine and hot packs.

Case 1. White, male, age seven, came into the hospital following a severe cold with orbital swelling and proptosis. The etiology was apparently from ethmoiditis. Temperature was 103 degrees, leukocytes 22,000. Sulfanilamide was given, sixty grains per day. After seventy-two hours the orbital swelling had receded about fifty per cent and the temperature was normal. In a week all edema was gone. No operative interference of any kind was attempted. Intra-nasal drainage was obtained with two per cent ephedrine sulfate in normal saline.

Case 2. White, female, age eleven, had had a severe sore throat and cold from which she apparently was recovering. She went to school and returned home during the afternoon because of severe pain above the left eye. When seen the next morning she had a temperature of 103 degrees, marked orbital swelling and proptosis. Muscular movements were not disturbed. X-rays of sinuses showed ethmoiditis with antra clear and no frontal sinus on the left side. Treatment consisted of sulfapyridine, grains seventy-five a day for two days. The temperature dropped to normal and the edema receded considerably. Sulfanilamide therapy was then substituted because of nausea from sulfapyridine. She was dismissed from the hospital at the end of a week with no orbital swelling.

Case 3. White female, age fifty, came into the office with marked orbital swelling and proptosis

which followed a cold. Etiology was ethmoiditis. With sulfanilamide, grains one hundred twenty per day, for two days the temperature which was 101 degrees dropped to 98.4 degrees and the edema began to subside. At the end of a week orbital reaction had practically disappeared.

TUBERCULOSIS CONTROL

SPONTANEOUS PNEU- MOTHORAX*

Robert Charr, M.D.

Robert Charr reports ten cases of fatal spontaneous pneumothorax. All cases were in the third and fourth decades of life; six were males and four females. Eight had pulmonary tuberculosis and two anthracosilicosis.

"In all, the most of the pneumothorax was sudden, and it occurred while the patients were in bed. In none of the cases severe coughing, sneezing or any other form of physical exertion preceded the fatal accident. The chief complaints were dyspnea and pain in the same side of the chest as the pneumothorax. All showed cyanosis, clammy skin, weak pulse, dry mucous membrane of the mouth with thirst and apprehension of impending death."

At necropsy, it was found that in seven of the cases the pulmonary rupture was in the midaxillary aspect of the upper lobe and in three it was on the anterior surface about the midclavicular line. In two of the latter group the rupture was in the upper lobe and in one in the lower lobe. In all the perforation was either in the front or the axillary region of the lungs—in none on the posterior surface of the lung.

"In three cases with the rupture on the anterior surface of the lungs, the perforation took place through the center of large and acutely caseous tuberculous nodules, measuring about 1.5 cm. in diameter. The visceral pleura covering them was thin and transparent without adhesions to the adjacent parietal pleura. Following the ruptures deeper into the lungs led into irregularly shaped and acute cavities in the center of caseous consolidation. The cavities varied in size and were located in the anterior half of the lungs. Projecting into the cavities were several stumps of bronchi and many cord-like structures criss-crossing the cavities, which on section proved to be the remnants of lung tissues. Excursion

* Spontaneous Pneumothorax, Robert Charr, Amer. Rev. of Tuberc., Vol. XL, No. 5, Nov., 1938. Tuberculosis Abstracts, February, 1940.

of the air through these bronchial stumps was free. When the air was rapidly pumped into the main bronchi, the perforated visceral pleura covering the caseous nodules ballooned out remarkably. The surface distribution of the caseous tubercles in these three cases was interesting. Practically all the acutely caseous tubercles were on the anterior portions of the lungs. The posterior parts showed principally congestion and areas of gelatinous pneumonia.

"In seven cases with the ruptures in the axillary region, the character of the ruptures differed from those already described. In none did the perforation take place through the center of caseous tuberculous nodules as in the previous cases. There was much pleural thickening about the ruptures. The tuberculosis which was present in all expecting two anthracosilicotic cases was chronic in form with considerable fibrosis throughout the lungs. Although there were scattered caseous tubercles, many of them showed, on histological examination, fibrous capsules surrounding them. Furthermore none of these cases showed superficial tubercles as acutely caseous as those in the first three cases."

It seems that the immediate cause of the pulmonary rupture in these seven cases may have been tugging on the pleural adhesions. There is considerable vertical excursion of the lungs due to the greater depth of the costophrenic angle at that point. The sliding motion of the lung upon the inner surface of the thorax is probably most marked along the axillary aspect of the chest, which, if that is the case, accounts for the marked tugging movement on the pleural adhesions along the axillary region.

The absence of pulmonary rupture on the posterior aspect of the lungs confirms the belief that the cause of spontaneous pneumothorax is largely a mechanical one. The front and the axillary portions of the thorax move more in respiration than the posterior parts where the ribs are attached to the spinal column. These factors of chest movement may be more pronounced when a person lies on his back.

The left side is more frequently involved than the right, the per centage being approximately sixty on the left and forty on the right. Various theories have been advanced to account for leftsided preponderance but there seems to be no doubt that the heart action produces an additional pulmonary mobility on the left side.

Spontaneous pneumothorax occurs in diseases other than tuberculosis. In the author's present series, two cases had far advanced anthracosilicosis uncomplicated by tuberculosis. In one of these there were large emphysematous blebs in the midaxillary region of the upper lobes, rupture of which very likely produced the pneumothorax. Over these blebs the visceral pleura was considerably thickened, but the

microscopical examination of the walls of the blebs, showed extreme thinning of the elastic layer and at several points there was an actual breach in the continuity of the elastic lamina. In the other case the perforation of the lung was due to an extension of a cavity located in the center of a large anthracosilicotic mass in the right upper lobe.

Morphological changes of shock and related capillary phenomena were noted. These changes were marked diffuse congestion of capillaries and venules, especially in the lungs, liver and kidneys. Many of the alveolar spaces were filled with edematous fluid, and the capillaries were filled with blood. Supportive treatment usually employed in shock, in addition to withdrawal of air from the pleural space, which, of course, is most important, may be of value. Wrapping the patient with blankets, giving hot drink, and oxygen and intravenous administration of fluid may be helpful, though Moon has warned against too much heat producing peripheral vasodilatation and loss of body fluid in the form of perspiration, which may aggravate shock.

NEWS NOTES

OSTEOPATHS

The Kansas Supreme Court ruled on February 6th that it had sustained the motion to make definite and certain filed by the Wilson County Hospital in the injunction case brought by osteopath Milton V. Gafney, of Neodesha. This action will seemingly make it necessary for the osteopaths to either dismiss their case or to amend their petition along the lines requested in the motion.

The case of the State Osteopathic Association v. William H. Burke, Collector of Internal Revenue was argued before the United States Circuit Court of Appeals, in Wichita, on January 25th. Justice Sam G. Bratton, Justice Alfred P. Murrah and Justice Edgar S. Vaught heard the cases. Mr. S. S. Alexander, United States District Attorney, appeared on behalf of the government and Mr. E. H. Hatcher of Topeka appeared on behalf of the osteopaths. Major issue in the case is whether the law of the state of Kansas permits osteopaths to use and dispense narcotics. If the court holds that osteopaths are permitted to use narcotics in Kansas they will be permitted to register under the Harrison Narcotic Act. If the court finds to the contrary they will not be permitted to register.

The Kansas State Board of Registration and Examination requested and was granted permission to appear in the latter case, on an amicus curiae relation. The Board filed a brief prepared by Mr. Theo F. Varner, attorney for the Board, with the court on February 3rd.

1940 MEETING

The Committee on Publicity for the next annual session has prepared the following announcement of arrangements for the meeting:



A HALLMARK OF QUALITY—A SYMBOL OF TRUST

For more than a quarter of a century, it has been our privilege to work closely with physicians and surgeons in designing and manufacturing scientific supports to meet the physiological, surgical and maternity needs of their patients.

Now as we enter a new year, we again pledge ourselves to keep faith with the profession. *First*, by maintaining consistent research to assure authentic design; *second*, by manufacturing scientific supports of the finest quality; *third*, to

assure correct fitting through regular education and training of corsetieres; and *fourth*, to adhere to the policy of ethical distribution. We trust that our seal will continue to be your hallmark of quality and your symbol of confidence whenever scientific supports are indicated.

Samuel H. Camp
President

CAMP TRADE MARK *Supports*

S. H. CAMP & COMPANY
JACKSON, MICHIGAN

Offices: New York, 330 Fifth Avenue; Chicago, Merchandise Mart; Windsor, Ont.; London, England

"Plans are rapidly taking form for the 81st annual session of The Kansas Medical Society which will be held in Wichita May 13-16 with the Sedgwick County Medical Society as host.

Eleven guest speakers from Boston, Chicago, St. Louis, Iowa City, Rochester, Denver, and Oklahoma City have already been secured and several more will be added. The Committee on Scientific Work of the State Society is co-operating with the local program committee by furnishing a number of scientific papers by Kansas physicians. Physicians interested in this are asked to submit papers to the committee chairman, Dr. John Porter, Concordia. Papers should be twenty minutes in length.

Special stress is being placed upon scientific exhibits and it is the aim of the local committee to have thirty or more. A new plan this year is being carried out with the presentation of "animated" exhibits, which will be lecture-exhibits on such topics as fractures, burns, abnormal deliveries, intubation, pathology of the breast, and heart.

In the field of entertainment there will be the golf, skeet, and trapshooting tournament on Monday the 13th, with a stag banquet that evening. Tuesday evening will be the time for the alumni roundup, where alumni of the various medical schools will gather for a banquet followed by something really "different." We are not allowed to disclose much of the nature of the entertainment, but can say that it is an original musical comedy dealing entirely with professional themes and there is a money-back guarantee that it will be hilarious.

An innovation which holds much of value for the doctor's secretary, assistant, office girl, amanuensis, or whatever she may be called, is to be held Monday, May 13. This will be an all-day meeting with headquarters at the Allis Hotel. The program is designed to bring practical suggestions, aids, and hints to the doctor's public-buffer—his office girl.

There will be a dramatic presentation to show how the patient should be handled by the office assistant from the time he comes in until he leaves. There will be a symposium covering such subjects as office management, account, collections, telephone technique, office housekeeping, etc.

An excellent speaker has been secured for their luncheon and time will be allowed for the formation of a state organization of physicians' assistants, which should prove to be a most valuable adjunct to the physicians of the state.

Since such a meeting should increase the efficiency and value of the "office girl" it is hoped that physicians over the state will urge their assistants to attend and perhaps persuade them to do so by paying their expenses.

The Sedgwick County committees in charge of the meeting have been at work for several months laying the groundwork for an outstanding session.

Please encircle the dates—May 13-16—on your calendar with the notation "Going to Wichita to the State Meeting."

CONFERENCE

Dr. F. L. Loveland, of Topeka, was elected President for the year 1940-41, of the National Conference of Medical Services at a meeting of that organization held in Chicago on February 11th.

The organization, which is composed of representatives of state medical societies and other medical organizations, meets annually for discussion of medical economics and similar problems. Dr. Loveland served as secretary of the conference during the year 1939 and '40.

CANCER FILMS

The Committee on Control of Cancer recently furnished to the central office, five film strips on skin cancer which will be available for loan to members of county medical societies. One of the strips is in color and the other four are in black and white. All are thirty-five millimeter in size and legends are provided with each. The strips were prepared by Dr. H. E. Snyder of Winfield, Dr. Marion Trueheart of Sterling and Dr. J. V. Van Cleve of Wichita.

The major project of the Committee on Control of Cancer during this year will be its joint program with the Kansas Federation of Women's Clubs and the Kansas Womens Field Army for the presentation of lay talks on skin cancer. The committee hopes that each county medical society will discuss and complete plans for lay programs of this kind.

ADVISORY COMMITTEE

A meeting of the Norton Sanitarium Advisory Committee was held in Wichita on February 8th. Members present were Dr. H. N. Tihen, Dr. Hugh Hope, Dr. F. P. Helm, Dr. F. L. Loveland, and Dr. C. F. Taylor. Dr. Loveland was elected as chairman and Dr. Hope was elected as secretary of the committee for the next year. Matters pertaining to the medical facilities of the Norton Sanitarium and to the coordination of the institution with the Kansas tuberculosis program were discussed.

The Advisory Committee is an official agency of the state of Kansas with powers and duties fixed by statute.

STATE LABORATORY

The Kansas State Board of Health recently adopted the following new procedure for the handling of specimen examinations through the Kansas State Board of Health Laboratory:

RESOLUTION

The Kansas State Board of Health hereby instructs the state laboratories to furnish laboratory service for diagnosis of all communicable diseases at public expense to all state and county boards of social welfare clients, social security act clients, Works Progress Administration clients, and to all other types of public assistance clients; to all inmates or patients of federal, state, county, or municipal institutions and homes; and to all other residents of the State of Kansas who find it difficult or impossible to pay the costs of laboratory service of this kind in the usual and customary manner.

In order to assist in the provision of this service, the Board has approved the following request form which will be placed in use effective immediately.

REQUEST FOR SPECIMEN EXAMINATION BY

The Kansas State Board of Health Laboratory

I do hereby certify that it will be difficult or impossible for..... (name)..... of..... (street).....
..... (city)..... (county)..... to pay for this examination in the usual and customary manner. I request therefore, that this test be made for me without charge by the Kansas State Board of Health Laboratory.

(Physician's signature).....

(Technical data in regard to test on reverse side of card.)

The Board, also, instructs the State Laboratories to provide laboratory service at public expense and with-

PROFESSIONAL PROTECTION

SINCE 1899
SPECIALIZED
SERVICE

A DOCTOR SAYS:

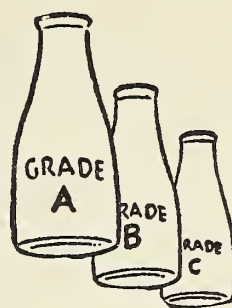
"I never fully realized until I got into this jam what a comfort it could be to be backed up by a fair, square-dealing concern like yours."

THE

MEDICAL PROTECTIVE COMPANY

OF FORT WAYNE, INDIANA

WHEATON, ILLINOIS



YOUR PATIENTS TOO
APPRECIATE GRADE A Rx WORK

•

QUINTON-DUFFENS
OPTICAL COMPANY

Your Local Independent Wholesaler

SILVER PICRATE

Wyeth

**Has shown a CONVINCING RECORD* OF
EFFECTIVENESS in ACUTE ANTERIOR URETHRITIS**

**due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
*Monilia albicans***

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 25, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

out requirements of request forms, to all county and city health officers, all employees of the Kansas State Board of Health, and all staff members of federal, state, county and municipal institutions and homes, who desire to utilize the services of the state laboratories in conjunction with their official duty.

The Board feels, however, that it should not provide services of this kind at taxpayers' expense to persons able to provide for themselves. Since for practical reasons the Board must leave the determination of this question to the physicians of the state, it respectfully requests the cooperation of all physicians in making certain that state laboratory services are furnished only to persons within the above approved categories.

All regulations in conflict herewith are revoked.

Major intention of the Board in the above resolution is to standardize the use of the laboratory facilities by physicians and to save taxpayers the necessity of providing assistance to those who find it possible to furnish their own laboratory services.

COUNCIL MEETING

A meeting of the Council was held, in Topeka, on January 28th. Officers and Councilors present were: Dr. C. C. Nesselrode, Dr. F. L. Loveland, Dr. John Porter, Dr. J. W. Randell, Dr. J. L. Lattimore, Dr. Marion Trueheart, Dr. W. P. Callahan, Dr. F. R. Croson, Dr. L. S. Nelson, Dr. G. W. Hammel, Dr. C. D. Blake, Dr. A. C. Armitage, Dr. O. W. Davidson, Dr. N. E. Mellencamp, and Dr. W. M. Mills. Other member present were: Dr. J. M. Mott, of Lawrence; Dr. J. F. Gsell, of Wichita; Dr. Hugh Hope, of Hunter; Dr. H. L. Snyder, of Winfield; and Dr. P. T. Pettit, of Iola. Mr. Jack Austin, of Wichita, and Mr. Clarence G. Munns were also present.

Dr. Mills presented a report on behalf of the Editorial Board; Dr. Porter presented the Secretary's report and Clarence Munns presented a report on behalf of Dr. George M. Gray, Treasurer.

Mr. Austin presented a description of the plans of the Sedgwick County Medical Society for the 1940 annual state meeting. The Council commended that society for the excellent plans it has prepared and authorized any financial assistance that might be necessary from the state Society. A request from the Kansas Hospital Association for permission to combine its 1940 state meeting with the Society meeting was unanimously approved.

Among other matters approved by the Council were the following: A decision that the Editorial Board shall be authorized to make disposal of Journal review books and exchange periodicals in any way it desires; a suggestion that the President appoint a committee of the Council to discuss with the Kansas State Board of Registration and Examination ways and means in which the Society can assist in apprehending Medical Practice Act violations; the appointment of a Society committee to assist in locating physicians in places where additional medical facilities are needed; an authorization to the Committee on Medical Economics to continue its efforts for obtaining an improved method on indigent medical care; an authorization for the Committee on Pharmacy to make arrangements for the Society to be represented at the next United States Pharmacopoeia Convention.

Mrs. Donald Muir, State Commander of the Kansas Women's Field Army, discussed the plans and program of that organization and expressed appreciation for the assistance the Society has provided in that regard.

Dr. Nesselrode discussed the present extensive program

of the Auxiliary, the assistance that can be provided by the Society and requested the aid of the Councilors in furthering Auxiliary organization.

APPOINTMENT

Dr. C. C. Nesselrode, President, recently announced the appointment of Dr. J. W. Spearing of Columbus and Dr. W. G. Reinhart of Pittsburg as members of the Committee on Control of Tuberculosis.

LECTURE

The third lecture in the course on medical history being given by the University of Kansas School of Medicine is to take place on March 4th. Dr. Henry E. Segrist, William H. Welch professor of the history of medicine, and director of the Institute of the History of Medicine at Johns Hopkins University, will be the guest speaker. Dr. Segrist will deliver two lectures, one at four o'clock in the Auditorium of the Hixon Laboratory, on "Founding of the Universities" and at eight o'clock he will speak in the Auditorium of the Children's Pavilion on "Medieval Plagues."

SALESMEN

Several members have advised that they have been defrauded by a book salesman who claims to offer a dictionary in conjunction with magazine subscriptions at a particularly reasonable price.

When last heard of the salesman was calling himself R. O. Sanderson and was claiming to be a representative of the Publishers Service Company of Chicago. That company advises that it has no knowledge of an employee by that name.

The central office would appreciate hearing from any members who encounter this person.

Information has also been received from neighboring states regarding other fraudulent salesmen. One of these claims to offer office coats at low prices; another is defrauding physicians by paying for eyeglasses with large amount forged checks; and several are utilizing the old medical racket of taking instruments for repair.

HEALTH OFFICER

The County Commissioners of Marion County announce the appointment of Dr. David Duncan Holaday, formerly of Osage City, on January 8th, to the position of full-time health officer of that county. Dr. Holaday was graduated from the University of Kansas School of Medicine in 1935 and recently took a post graduate course in Public Health at the Vanderbilt University School of Medicine, of Nashville, Tennessee.

PNEUMONIA PROGRAM

The Kansas State Board of Health has received acceptances of its pneumonia control program from all most all of the areas of the state and representatives of the board are attempting to make suitable arrangements in each area for the establishment of laboratory and depot facilities.

The large demand for the program coupled with the



KMS ELIXIR



SPRING TONIC

A

HIGH VITAMIN

SURE CURE

(GUARANTEED)

For

That Must-Get-Away Feeling

The Doctor's Blues

Behind-the-Times Bogey

Professional Pandiculation

FOR GENERAL AND SPECIFIC EDIFICATION

(To be taken May 13-16 in Wichita Only)

MEDICINE: Dr. Soma Weiss, Boston, Prof. Medicine, Harvard Univ.; Dr. William Ohnstead, St. Louis, Prof. Medicine, Washington Univ.; Dr. Julian H. Boyd, Asst. Prof. Pediatrics, Iowa Univ.

SURGERY: Dr. R. W. McNealy, Chicago, Chief of Staff, Cook County Hospital; Dr. S. W. Harrington, Mayo Clinic; Dr. Charles Galloway, Evanston, Asst. Prof. Ob. & Gyn., Northwestern Univ.; Dr. T. Leon Howard, Denver, Pres. - elect American Urological Society, Asst. Prof. Surgery, Colorado Univ.; Dr. Earl D. McBride, Oklahoma City, Asst. Prof. Orthopedic Surgery, Oklahoma Univ.

EENT: Dr. C. S. O'Brien, Prof. Ophthalmology, Iowa Univ.; Dr. D. M. Lierle, Prof. Otolaryngology, Iowa Univ.

MEDICAL ECONOMICS: Alphonse M. Schwitalla, S.J., Ph.D., Dean, St. Louis University Medical School.

ALSO: A number of excellent papers by Kansas Physicians.

ANECDOTE:

Liberal dose of Annual Golf, Skeet & Trapshooting Tournament plus stag banquet. (Good for Monday, May 13, only.)

Alumni Roundup banquet—a sure-fire emetic for blues, jitters and weight-of-the world. You'll not want to miss the colossal, original musical comedy, the like of which never has been seen. (Good for Tuesday, May 14, only.)

Annual banquet for physicians and wives. Food, fun, and dancing. (Good for Wednesday, May 15, only.)

RECOMMENDED Rx: A post-graduate course for your office girl. A one-day meeting will be held Monday, May 13, for this indispensable personage. Symposium, drama, talks presenting proper reception room tactics, telephone technique, office housekeeping, collections, accounting notes, etc. Be sure to send her.

Bring the wife for Auxiliary Sessions. She's bound to enjoy it.

KMS ELIXIR

ALKALIZES

EDIFIES

PURGES

RELAXES

PLEASES




small amount of funds available for the current year has made it difficult to provide complete serum supplies in each county, and the Society Advisory Committee on Pneumonia Control has therefore suggested that an attempt be made to consolidate several counties under one depot, wherever such is possible. A considerable number of counties have signified their willingness to cooperate in this arrangement.

Inasmuch as important scientific information can be obtained under this program as to the relative and other efficacy of sulfapyridine and serum in the treatment of pneumonia, the Board and the advisory committee are particularly hopeful that all physicians who utilize the supplies will fully cooperate in completing the case record forms which have been provided.

MEETING

The Thirty-Sixth Annual Congress on Medical Education and Licensure was held in Chicago on February 12-13. The following Kansas members attended: Dr. H. L. Snyder of Winfield; Dr. M. C. Ruble of Parsons; Dr. J. F. Hassig, of Kansas City; Dr. H. E. Haskins, of Kingman; Dr. O. L. Cox, of Iola; Dr. F. S. Hawes, of Russell; Dr. J. E. Henshall, of Osborne; Dr. C. E. Joss, of Topeka; and Dr. H. R. Wahl, of Kansas City.

MEDICO-MILITARY SYMPOSIUM

The Annual Spring Medico-Military Symposium will be presented in Kansas City, Missouri, March 14-15, 1940, by the Kansas City Southwest Clinical Society, in conjunction with the 7th Corps Area, United States Army and this division of the Ninth Naval District.

Guest speakers who will take part in the medical section of the program are Dr. Alfred Folsom, urologist, Dallas, Texas; Dr. F. A. Jostes, orthopedist, and Dr. Ralph Kinsella, internist, St. Louis, Missouri; Dr. H. Winnett Orr, orthopedist, Lincoln, Nebraska, and Dr. A. A. Zierold, surgeon, Minneapolis, Minnesota. Guest speakers for the military section of the program have not been announced.

The Kansas City Academy of Medicine will hold their Fiftieth Anniversary dinner, March 15th, with Dr. Allen O. Whipple, surgeon, New York City, as their guest speaker. This dinner meeting will be open to the physicians attending the spring symposium.

Members of the medical profession, both medical reserve and non-military, are invited to attend this two day meeting, registration complimentary.

TUBERCULOSIS DIRECTOR

Dr. F. C. Beelman, who has been county health officer of Sedgwick County for the past three years, was recently appointed as Director of Tuberculosis Control of the Kansas State Board of Health and assumed his position on February 1st. Dr. Beelman was graduated from the Ohio University State College of Medicine in 1935.

BLIND PROGRAM

Dr. John A. Billingsley, State Ophthalmologist for the Kansas State Board of Social Welfare, recently issued the following cumulative report as of January 1st, on examinations and treatment furnished under the Kansas blind program.

Examination Program	
No. of persons examined to date.....	2,357
No. of eye examinations approved for Aid to the Blind	1,710
No. of eye examinations not eligible for Aid to the Blind	637
No. of eye examinations pending disposition....	4
No. of cases not accepted.....	1
No. on the register not issued to cases.....	5
No. of re-examinations requested and approved	169
Restoration of Eyesight Program	
Total number of cases declared eligible for treatment	686
No. of cases refused treatment.....	104
No. of cases under treatment.....	104
No. of cases treatment has been cancelled.....	19
No. of cases not eligible after treatment.....	176
No. of cases continue eligible after treatment....	165
Total amount authorized for cases now completed	\$26,810.94
Total amount paid out, as approved for completed cases	24,391.20
Percent	
Doctor's fees	\$14,749.00—60.46
Hospital fees	7,670.75—31.44
Optical fees	1,683.50— 6.93
Medicines	287.92— 1.17
Average cost per case.....	87.10
Prevention of Blindness Program	
Total number of cases declared eligible for treatment	192
No. of cases known to refuse treatment.....	2
No. of cases under treatment.....	64
No. of cases treatment has been cancelled.....	1
No. of cases completed with treatment.....	59
No. of cases eligible for aid to the Blind after treatment	2
Total amount authorized for cases now completed	\$ 3,034.50
Total amount paid out, as approved for completed cases	2,777.89
Percent	
Doctor's fees	\$1,773.00—63.82
Hospital fees	767.25—28.63
Optical fees	198.00— 7.13
Medicines	39.64— 1.43
Average cost per case.....	47.08

MEMBERS

Dr. L. G. Allen, of Kansas City attended the Tenth Annual Conference of the American College of Radiology in Chicago, February 11th. Dr. Allen is chairman of the Committee on Public Relations of that organization.

Dr. Henry Asher, of Lawrence, has been appointed County Health Officer of Sedgwick County to take the place of Dr. F. C. Beelman, who resigned to accept the Directorship of the Division of Tuberculosis control with the Kansas State Board of Health.

Dr. L. L. Cooper, of Fort Scott, was appointed county coroner of Bourbon County, to succeed the late Dr. R. O. Crume.

An abstract of the article "The Intrinsic Purpose of X-Ray Therapy" by Dr. O. R. Brittain of Salina, which was published in the November issue of the Journal, ap-

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the A.M.A.

HAVE A STICK OF
CHEWING GUM
BEFORE YOU GO.
YOU'LL FIND IT
VERY REFRESHING

THANK YOU, DOCTOR,
CHEWING GUM IS
SOMETHING WE ALL
ENJOY



**Doctor—here's how
wholesome Chewing Gum
helps build good will for you**

Every doctor knows the importance of ending up a consultation in a friendly, cheerful way.

Many doctors know how helpful it is to have on hand a supply of wholesome, delicious Chewing Gum to offer patients when saying "good-bye." This inexpensive enjoyment sends them away with a good taste in their mouths!

Aside from good-will value, as you know, chewing exercises the teeth, helps cleanse and brighten them and is a refreshing pleasure. Try it, doctor.

The National Association of Chewing Gum Manufacturers, Rosebank, Staten Island, New York



Hotel Jayhawk

TOPEKA ~ KANSAS

Main Dining Rooms and Coffee Shop

Air Conditioned and Refrigerated

Many Private Dining Rooms Available for Special Parties

THE MOSBY HOTEL CO.

N. M. Mosby, Pres. & Gen. Mgr.

peared in the January issue of the National Bulletin of the American Society for the Control of Cancer.

An abstract of the article "Primary Sarcoma of the Lung with Brain Metastasis" by Dr. Ralph C. Ellis, of Kansas City which was published in the June issue of the Journal, appeared in the January issue of Radiology.

Dr. R. L. Gench, of Fort Scott, will leave about March 1st for Springfield, Illinois, where he will be associated with Dr. John J. Donovan.

Dr. C. Alexander Hellwig, of Wichita, is the author of an article entitled "Experimental Goiter Due to Calcium" which appeared in the January issue of the Archives of Surgery. Another article by Dr. Hellwig entitled "Histology of Pathology" was published in the December issue of Archives of Pathology.

Dr. Ross B. Mays, of Luray, has returned to Elkhart where he has opened offices. Dr. Mays practiced in Elkhart from 1915 to 1935.

Dr. M. C. Newman, of Toronto, has accepted a position with the United States Government at Bismark, North Dakota.

Dr. Herbert R. Schmidt, of Newton, has been appointed county health officer of Harvey county.

Dr. M. R. Stapp, for several years of Morrill, and recently of Battle Creek, Michigan, has returned to Kansas where he is located at Galva.

COUNTY SOCIETIES

The Shawnee County Medical Society held a meeting on February 5th. Dr. Ward Darley, of Denver, Colorado, spoke on "Chronic Undulant Fever—Its Incidence, Symptomatology, Diagnosis and Treatment."

The Clay County Medical Society held a meeting in Clay Center on January 24th. Dr. C. C. Stillman of Morganville was elected an honorary member of the society. The following officers were elected for 1940: President, Dr. G. B. McIlvain; Vice-President, Dr. S. A. Anderson; Secretary and Treasurer, Dr. R. B. McVay; Delegate, Dr. G. W. Bale; Board of Censors, Dr. D. O. Jackson, Dr. F. R. Croson, and Dr. G. B. McIlvain.

The Marion County Medical Society held a meeting in Marion, on January 10th. Dr. A. C. Eitzen, of Hillsboro, presented a paper entitled "Oxygen in the Treatment of Intestinal Obstruction." Dr. R. R. Melton, of Marion, discussed "The Administration of One Hundred Per Cent Oxygen." Mr. Tom Anderson of the Linde Air Products showed motion pictures on various methods of administering oxygen.

The Lyon County Medical Society held a meeting on February 6th, in Emporia. Dr. J. H. Danglade, of Kansas City, spoke on "Use and Abuse of Certain Cardiac Drugs" and Dr. F. C. Helwig, of Kansas City discussed "Certain Medicolegal Aspects of Acute Alcoholic Intoxication."

The Dickinson County Medical Society elected the following officers at their January meeting: President, Dr. W. A. Klingberg, of Hope; Vice-President, T. R. Conklin, of Abilene; Secretary-Treasurer, H. R. Turner, of Hope.

The Sedgwick County Medical Society held a meeting in Wichita, on February 6th. Dr. V. L. Pauley, of Wichita, spoke on "Problems in Thyroid Surgery" and Drs. T. W. Weaver and W. G. Gillett, of Wichita, spoke on "Lesions of the Visual Pathways." Speakers for the February 20th meeting of that society will be Dr. Francis Carmichael, of Kansas City, Missouri, and Dr. Thomas Butcher, of Emporia.

The Nemaha County Medical Society held election of the following officers at their meeting on January 23rd: President, Dr. S. M. Myers, of Corning; Vice-President, Dr. Martin Rucker, of Sabetha; Secretary-Treasurer, Dr. F. E. Wrightman, of Sabetha; Delegate, Dr. Harry Gray, of Seneca; Alternate, Dr. Clemens Rucker, of Sabetha.

The Pratt County Medical Society held a meeting on December 22, at which the wives were entertained. The following officers were elected: President, Dr. Herbert Atkins, of Pratt; Vice-President, Dr. J. R. Campbell, of Pratt; Secretary-Treasurer, Dr. Athol Cochran, of Pratt.

The Allen County Medical Society met at Iola on December 20. The following officers were elected for the year 1940: President, Dr. J. T. Reid of Iola; Vice-President, Dr. J. J. Michalak of Humboldt; Secretary, Dr. O. L. Cox of Iola; Treasurer, Dr. F. L. B. Leavell, of Iola; Censor, Dr. F. X. Lenske of Iola; Delegate, Dr. L. F. Schmaus of Iola and Alternate Dr. J. T. Reid.

The Wyandotte County Medical Society held election of officers for the year at a meeting of that society December 19th. Dr. Fred E. Angle of Kansas City was elected President; Dr. E. F. DeVilbiss of Kansas City, Vice-President; Dr. P. E. Hiebert, of Kansas City, Secretary; Dr. Thomas Richmond, of Kansas City, Treasurer, and Dr. A. J. Rettenmaier, of Kansas City, Censor. At the February 6th meeting of that society Dr. P. M. Krall of Kansas City, discussed "Essential Factors in the Production of Edema." Drs. T. R. Hamilton and W. J. Feehan will be the speakers of the February 20th meeting.

The Mitchell County Medical Society held a meeting January 24th at which the following officers were elected: President, Dr. H. B. Vallette, of Beloit; Secretary-Treasurer, Dr. H. L. Collins of Beloit; Delegate, Dr. Hugh Hope, of Hunter. Dr. D. C. Wakeman, of Topeka, was the speaker of the February 8th meeting of that society. Dr. Wakeman's subject was "Serum Treatment of Pneumonia."

The Ford County Medical Society held a meeting, in Dodge City, on January 12th. Dr. Gilbert Little, of Wichita, spoke on "Management and Treatment of the Nervous Patient." The following officers were elected: Dr. C. E. Bandy, of Bucklin, President; Dr. J. B. Ungles, of Satanta, Vice-President; Dr. R. E. Speirs, of Dodge City, Secretary; Dr. J. G. Janney, of Dodge City, Treasurer; Dr. V. B. Dowler, of Dodge City, Censor; and Dr. R. G. Klein, of Dodge City, Delegate.

The Anderson County Medical Society held a meeting in Garnett in January with election of the following officers: Dr. H. F. Spencer, of Garnett, President; Dr. R. D. Fraker, of Garnett, Vice-President; Dr. John N. Carter, of Garnett, Secretary-Treasurer.

The Marshall County Medical Society met January 25th in Marysville, where the following officers were elected for the year 1940: Dr. D. M. Difendorf, of Waterville, President; Dr. R. L. McAllister, of Marysville, Vice-

Behind MERCUROCHROME

(dibrom-oxymercuri-fluorescein-sodium)



is a background of

Precise manufacturing methods insuring uniformity

Controlled laboratory investigation

Chemical and biological control of each lot produced

Extensive clinical application

Thirteen years' acceptance by the Council of Pharmacy and Chemistry of the American Medical Association



A booklet summarizing the important reports on Mercurochrome and describing its various uses will be sent to physicians on request.

Hynson, Westcott & Dunning, Inc.
BALTIMORE, MARYLAND

REPRINT PRICE LIST

Reprints from articles in the
KANSAS MEDICAL JOURNAL

All Reprints are made the same size as Journal pages, 7 $\frac{3}{4}$ x 10 $\frac{1}{2}$ inches.
Transportation charges on reprints are to be paid by the Author

No. Copies	Pages	Without Cover	With Cover
100.....	4	\$ 9.00	\$12.25
250.....	4	9.75	14.50
500.....	4	11.00	17.50
1000.....	4	18.00	26.00

No. Copies	Pages	Without Cover	With Cover
100.....	8	\$12.50	\$16.00
250.....	8	14.00	18.00
500.....	8	16.00	23.00
1000.....	8	21.00	32.00

No. Copies	Pages	Without Cover	With Cover
100.....	12	\$16.00	\$20.50
250.....	12	18.25	23.50
500.....	12	21.25	28.25
1000.....	12	28.00	39.00

CAPPER PRINTING CO.

Capper Building,
TOPEKA, KANSAS

ACROSS LIGHT THRESHOLDS WITH THE

FELDMAN ADAPTOMETER



The Feldman Adaptometer offers you a means of making binocular tests of the light threshold. It is a qualitative instrument providing a quick method of definitely determining the presence of night blindness and rapid differentiation between normal and abnormal dark adaptation cases.

The Feldman Adaptometer is another "made by American" diagnostic instrument that you'll find very valuable in your practice.



BY AMERICAN OPTICAL COMPANY

President; Dr. H. H. Haerle, of Marysville, Secretary-Treasurer.

The Riley County Medical Society held election of the following officers at their January meeting in Manhattan: President, Dr. K. J. Gleason, of Manhattan; Vice-President, Dr. W. M. Reitzel, of Manhattan; Secretary-Treasurer, Dr. O. M. Heiberg, of Manhattan; Censors, Drs. M. W. Husband, W. M. Reitzel, and Darrel Evans.

DEATH NOTICES

Dr. David Walker Basham, 85 years of age, died on January 17th at his home in Wichita of a heart attack. Dr. Basham was born at Clifton Mills, Kentucky in 1854. He was graduated from the Kansas City Medical College in 1884 and from the New York Medical School in 1892. He has practiced in Wichita since 1902. Dr. Basham had six sons all of whom became doctors of medicine. Dr. Basham was a member of the Sedgwick County Medical Society, of which he was President Emeritus.

Dr. Ferdinand G. Bartel, 45 years of age, of Newton, died on November 26th of a sarcoma. Dr. Bartel was graduated from the University of Kansas School of Medicine in 1925. He was a member of the Harvey County Medical Society.

Dr. Albert B. Lewis, 82 years of age, of Hamilton, died on October 28th of pneumonia. Dr. Lewis was graduated from the Medical College of Indiana, at Indianapolis, Indiana, in 1882. He was a member of the Lyon County Medical Society.

Dr. George McClellan Liston, 75 years of age, of Baldwin, died on December 18th of heart disease following an operation. He was born at Willow Branch, Indiana, on November 8, 1864, and was graduated from the Medical College of Indiana in 1892, and of the Hospital College of Medicine, Louisville in 1896. He was an honorary member of the Douglas County Medical Society.

Dr. James Naismith, 78 years of age, died on November 28th of cerebral hemorrhage, at his home in Lawrence. Dr. Naismith was graduated from the Gross Medical College, of Denver, Colorado, in 1898. He was known to thousands of the University of Kansas students for his courses on hygiene and similar subjects and to thousands of others for his invention of the game of basketball. He was an honorary member of the Douglas County Medical Society.

BULLETINS

The following bulletin was issued on February 9th by the Committee on Scientific Work:

The Committee on Scientific Work wishes to again call to your attention the opportunities existing for members of the Society to gain recognition for scientific efforts through the committee's various contacts. Encouragement of younger men in particular should be urged through county groups.

The Program Committee of the Sedgwick County Medical Society has asked that several Kansas men appear at the state meeting in May. Papers should be limited to a presentation time of about twenty minutes. Some of these have been selected, but any worthwhile effort of a member of the state Society will be considered if it can be in the hands of the Committee on Scientific Work by March 1.

An excellent choice of out-of-state speakers has been made by the Program Committee of the Sedgwick County Medical Society. They have left the choice of in-state speakers very largely to our own membership. If we are to equal the standard they have set we must have the cooperation of the various county medical societies. The work is being done in the state and the speakers are here. It only remains for the proper committees to be informed and the various men to be urged to submit their efforts.

Papers reaching us too late, not suitable to the state meeting because of length, or for any other reason will be considered for publication in the Journal of the Kansas Medical Society, or for presentation before county and district meetings throughout the state. In this latter regard, the committee desires to serve you whenever possible in a double capacity, either supplying you with speakers for your own meetings or seeing that your members who can make the right kind of talks are available for other societies.

We would appreciate your making this information available to your members, either in whole or in part, at your earliest opportunity, and any individual effort you may be able to make will be doubly appreciated.

ANNOUNCEMENTS

The Annual Postgraduate Clinics of the University of Kansas School of Medicine will be held March 18 to 21, inclusive. Presentation of clinical cases with emphasis on therapy will be a feature of the courses. An effort will be made to demonstrate therapeutic procedures that the general practitioner can apply to his office practice, among which may be mentioned:

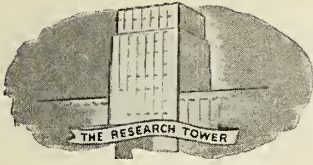
Rectal surgery; treatment of hemorrhoids, rectal tags and ulcers; use of the sigmoidoscope; ulcerative colitis and lymphogranuloma venereum. Injection of varicose veins. Special treatment clinic: administration of arsphenamine, bismuth, theelin, liver extract, blood transfusion and venoclysis. Allergy clinic. Endocrine and obesity clinic. Traumatic surgery: fractures; application of plaster casts. Minor surgery: demonstration of local anesthesia in surgery of ingrown toenail, sebaceous cyst and biopsies, etc. Gynecological clinic: treatment of endocervicitis, menorrhagia and sterility; cancer. Demonstration of pneumothorax in tuberculosis; tuberculin testing; childhood tuberculosis and its management. Genito-urinary clinic: differential diagnosis in urethritis, demonstrating staining methods; cystitis; catarrhal prostatitis; caruncles and strictures of the female urethra; demonstration of the use of the cystoscope. Arthritis clinic: presentation of cases illustrating various types of arthritis; discussion of therapeutic results from chaulmoogra oil, salicylates, vaccine, stilbestrol, sulphur and gold. Cancer clinic: pathological specimens of malignant and benign breast tumors; surgical and roentgen therapy. Physical therapy of neuritis, arthritis and skin diseases.

Common diseases of the eye, ear, nose and throat; sulfanilamide therapy; sulfapyridine in pneumonia; surgical-pathological conferences and common diseases of the skin.

Kansas physicians are invited to write to the Committee on Postgraduate Clinics relative to the courses in which they are interested. A complete program will soon be ready and will be sent on request. There will be no registration fee.

For further information write, Hugh L. Dwyer, M.D., Chairman Committee on Postgraduate Clinics, School of Medicine, University of Kansas, Kansas City, Kansas.

STUDIES IN THE AVITAMINOSES

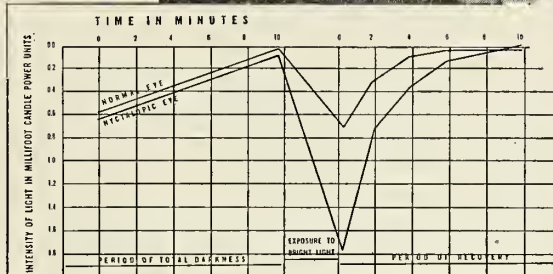


This page is the second of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A two-page insert on the same subject appears in the February 17 issue of The Journal of the American Medical Association.

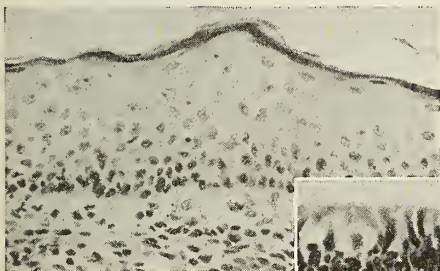
Manifestations of Vitamin A Deficiency

One of the early manifestations of vitamin A deficiency is nyctalopia, a loss of visual acuity in dim light. While several pathologic states (retinitis pigmentosa, toxic amblyopia, detachment of the retina) also produce night blindness, vitamin A deficiency is probably the most frequent cause. After exposure to the blinding glare of a bright light the normal eye adapts itself relatively quickly to lowered illumination. In nyctalopia due to vitamin A deficiency, the time required for recovery of visual acuity is longer.

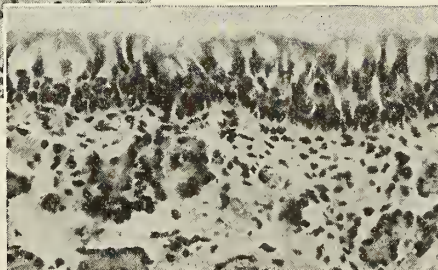
In otherwise normal eyes, measurement of capacity for dark adaptation by means of the biophotometer has been suggested as a method of discovering vitamin A deficiency.



Lower line shows the longer time required for the recovery to pre-exposure level by the nyctalopic.



Above, stratified, keratinizing epithelium of the turbinate mucous membrane of a vitamin A deficient monkey; at right, normal mucosa.



Pathologic epithelial changes produced by vitamin A deficiency are illustrated by the photomicrographs of turbinate mucous membrane taken from normal and vitamin A deficient monkeys. The progressive pathologic process consists of atrophy of the epithelium, reparative proliferation of the basal cells and finally, as depicted in the upper photograph, replacement of the normal by a stratified, keratinizing epithelium.



UPJOHN

The American Board of Obstetrics and Gynecology: Announces the general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board at the Atlantic City Hospital, Atlantic City, New Jersey, from Friday, June 7, through Monday, June 10, 1940, prior to the opening of the annual meeting of the American Medical Association in New York City on Wednesday, June 12, 1940. Candidates are requested to note that the dates of the examinations have been advanced one day from those previously announced. Application for admission to Group A, Part II, examinations must be on file in the Secretary's Office not later than March 15, 1940.

Formal notice of the time and place of these examinations will be sent each candidate several weeks in advance of the examination dates.

Candidates for re-examination in Part II must make written application to the Secretary's Office before April 15.

The annual dinner of the Board will be held in New York City on Wednesday evening, June 12, 1940, at the Hotel McAlpin. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

importance of the work of the Public Relations Committee and the necessity of the entire membership lending whole-hearted cooperation to the project of that vital committee. Mrs. Busenbark announced plans for a public relations tea. After the business meeting Miss Viola Garret gave an account of her vacation trip through the Scandinavian countries.

The Sedgwick County Auxiliary met at their regular luncheon meeting January 8, at the Innes Tea Room, where plans were made for the guest day tea to be held February 12. Auxiliary members who assisted with arrangements for the medical society's Christmas party were Mmes. J. S. Reifsneider, general chairman; Chas. Rombold, C. K. Wier, Allen Olson, R. L. Drake, R. A. West and E. C. Rainey, decorations and menu; J. W. Cheney, game room.

Mrs. A. E. Bence was hostess and Mrs. W. T. Elnen program chairman at the luncheon meeting.

EDITORIAL NOTES

The need of intensifying public relations work is all too obvious if one has close relations with lay minds. As an example a Kansas doctor received a letter from an old friend who is noted for his wide scope of reading and progressive ideas. In this letter the erudite friend strongly advocated socialized medicine and condemned the A.M.A. for its attitude toward such a movement. The doctor was astonished at his friend's vehement argument as he is a man usually moderate in expression. He concluded that his correspondent had been reading inaccurate statements. He immediately stuffed a manila envelope with pamphlet literature, added an argument of his own and sped to the mail.

A few days later he received another letter from his erudite friend saying that the literature sent had been carefully read, that the data presented threw an entirely different light on the problem. But, again, he condemned the doctors: "Why don't you broadcast your facts and arguments in such a manner that the average citizen will know about them? Get into the national magazines, get into the daily press. The other side does, and their sophistries are convincing unless one is fully informed."

Mrs. Daisy S. Mossiman, National Chairman Public Relations Committee, because of the urgent necessities involved has issued a special bulletin to all State Chairmen of Public Relations.

With typical political maneuvers disregarding fairness and truth certain proponents of the Wagner Bill have solicited women's organizations such as the Federated Clubs, P.T.A., etc., asking them to formally approve the bill and so notify their Congressmen.

AUXILIARY

PRESIDENT'S MESSAGE

At our Wyandotte County President's party, it was very encouraging and inspiring to me to hear our President of The Kansas State Medical Society, Dr. C. C. Nesselrode, announce publicly that the Auxiliary was a boon to the medical profession and that he was heartily in favor of such an organization. After about fifteen years we are making ourselves needed. This has come about, perhaps, through our Public Relations Committees. The efforts put forth in our respective units before our last legislature proved our worth. We really have a place to fill and a job to do. Let us serve.

My earnest hope is, that these doctors who know our value will sincerely interest those who have not yet come to that realization and help us to establish Auxiliaries in many more counties. As organized groups more can be accomplished than through lone individuals.

DOCTOR are YOU represented in the AUXILIARY TO THE KANSAS MEDICAL SOCIETY?

Mrs. L. B. Spake.

AUXILIARY NOTES

The Wyandotte County Auxiliary met January 12 for luncheon and business meeting at the home of Mrs. P. M. Krall. Mrs. E. D. Williams reported favorable progress in the Hygeia campaign. Mrs. Ray Busenbark spoke on the

DEPENDABLE PRODUCTS for PHYSICIANS

Zemmer

PRESCRIBE OR DISPENSE ZEMMER

Pharmaceuticals, Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled. Write for literature.

Chemists to the Medical Profession

THE ZEMMER COMPANY, Oakland Station, Pittsburgh, Pa.

86c out of each \$1.00 gross income
used for members benefit

**Physicians Casualty Association
Physicians Health Association**



**HOSPITAL
ACCIDENT
SICKNESS**



INSURANCE

For ethical practitioners exclusively
(50,000 POLICIES IN FORCE)

Liberal Hospital Expense Coverage for \$10.00 Per Year

\$5,000.00 accidental death	For
\$25.00 weekly indemnity, health and accident	\$33.00 per year

\$10,000.00 accidental death	For
\$50.00 weekly indemnity, health and accident	\$66.00 per year

\$15,000.00 accidental death	For
\$75.00 weekly indemnity, health and accident	\$99.00 per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

\$9,000,000 PAID FOR CLAIMS

\$200,000 deposited with State of Nebraska for
protection of our members.

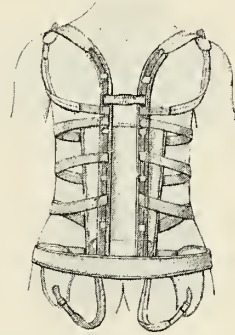
Disability need not be incurred in line of duty—benefits
from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

BACK BRACE

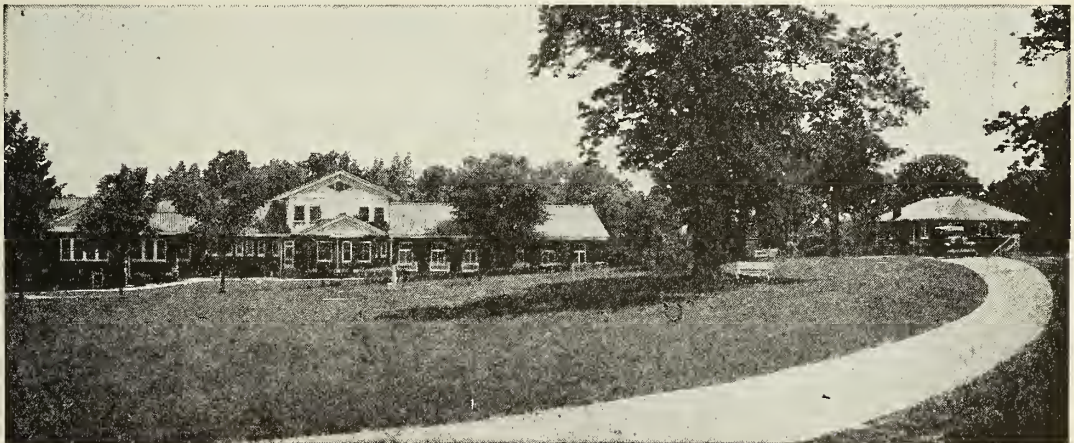
For correction of faulty posture,
severe sacro-iliac strain, and convales-
cent treatment of fracture of spine.



P. W. HANICKE MFG. CO.

**1013 McGee Street
KANSAS CITY, MO.**

Tel. Victor 4750



OAKWOOD SANITARIUM

The beauty and quietness of the environment of Oakwood Sanitarium cannot be over emphasized. This makes the Institution ideal not only for nervous and mental patients but for convalescents and rest cures as well. Alcoholics and drug addicts are accepted.

Illustrated Booklet and Rates on Request

**OAKWOOD SANITARIUM
Tulsa, Oklahoma, Route 6**

NED R. SMITH, M.D.
Resident Medical Director

Mrs. Mossiman asks Auxiliary members to combat this movement and gives comprehensive directions for so doing. Her letter of advice and instruction should be immediately read to or by all members even if it is necessary to call special meetings.

Mrs. W. G. Emery, Chairman,
Press-Publicity.

A. M. A. AUXILIARY

The 18th Annual Convention of the Women's Auxiliary to the American Medical Association will be held in New York City, June 10-14, 1940, with headquarters in the Hotel Pennsylvania. In view of the fact that the second edition of the World's Fair will accelerate advance hotel reservation, it is urged that reservations be made immediately thru the Housing Bureau which has been set up by the American Medical Association, namely Dr. Peter Irving, Room 1036, 233 Broadway, New York City.

THE STOKES HOSPITAL

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The **DRUG** treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Med. Dir.

923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102



W. E. ISLE COMPANY
2nd FLOOR RIEGER BLDG.—1121 GRAND AVE.
TELEPHONE VICTOR 2350
KANSAS CITY, MISSOURI

ISLE BUILT LIMBS

*Approved by the
American College of Surgeons*

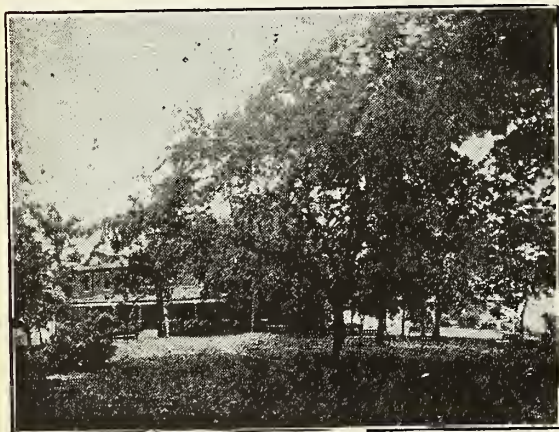
Each Amputee Is Individually Fitted
in Order to Give Comfort and
Satisfaction

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray

Grandview Sanitarium

KANSAS CITY, KANSAS, (26th St. and Ridge Ave.)



A High Grade Sanitarium and Hospital of
super accommodations for the care of:

NERVOUS DISEASES
MILD PSYCHOSES
THE DRUG HABIT
AND INEBRIETY.

Situated on a 20-acre tract adjoining City Park
of 100 acres. Room with private bath can be
provided.

The City Park line of the Metropolitan Railway
passes within one block of the Sanitarium.
Management strictly ethical.

Telephone: Drexel 0019

SEND FOR BOOKLET

E. F. DeVILBISS, M.D., SUPT.

OFFICE, 1124 PROFESSIONAL BLDG., KANSAS CITY, MO.

The Journal Of THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

MARCH, 1940

Number 3

CORONARY SCLEROSIS*

C. Alexander Hellwig, M. D.

Wichita, Kansas

Arteriosclerosis is not a product of modern civilization. It has existed since the earliest times of human history. Ruffer¹ has observed it in mummies from 1500 B. C. The cause of arteriosclerosis must have been present during a period of at least thirty-five centuries.

Until recently arteriosclerosis was regarded not as a disease, but as a natural incidence of old age. Morgagni in 1761 was the first who associated chest pain with hardening of the coronary arteries. The clinical study of coronary sclerosis has made, throughout the world, great progress during the last twenty years, especially since the classical work of Herrick². As to the cause of the disease, however, MacCallum's³ view expressed in 1922 still holds today, that we are quite as ignorant as were our forefathers in the days of Morgagni.

What is arteriosclerosis? There are two forms. In the peripheral arteries one finds frequently in aged persons sclerosis of the middle layer as described by Moenckeberg⁴. The lesion is characterized by necrosis of muscle fibres resulting in calcification.

The second, much more important form of arteriosclerosis, was named by Marchand atherosclerosis from the Greek *athere*, mush, because of fatty matter found in the wall of the diseased vessels. Virchow was the first who called attention to these lipoid deposits in the intima of atheromatous arteries. Fifty years later, Aschoff⁵ proved that the lipoid of these lesions is cholesterin and that the source of these deposits is the cholesterin of the blood.

Atherosclerosis is the exclusive form of arteriosclerosis encountered in the coronary arteries. The fact that fatty material is constantly found in atherosclerotic lesions, suggested the experimental production of the disease by feeding fat-rich diet. To Anitschkow⁶ (1913) belongs the credit for the first successful production of atherosclerosis in rabbits by feeding large doses of cholesterin. His work has been confirmed in Europe by Lubarsch, Chalutow and

Maximow; in America by the brilliant studies of T. Leary⁷. The latter described in great detail the various stages of atherosclerosis produced in rabbits and compared them with the spontaneous lesions of human atherosclerosis. Deposits of lipoids in the intima, formation of lipophages, and fibrosis were identical in the experimental and spontaneous lesions. Calcification which plays such an important role in human atherosclerosis was only rarely encountered in the animal.

I

During the last year, I have studied the different stages of atherosclerosis in the coronaries of sixty-two autopsy cases. The coronaries of all age groups, including newborns and children, were examined histologically.

While coronary occlusion often strikes like a bolt out of a clear sky, anatomic examination shows that years elapse between the onset of coronary sclerosis and the final catastrophe. Coronary sclerosis has its inception during youth and begins to increase rapidly during the fourth decade. Thrombosis never occurs in a normal coronary artery. It is to be regarded as a late episode in the course of a very chronic process which has existed for twenty to thirty years.

The earliest lesions in human coronary arteries is characterized by the appearance of finest lipoid droplets in the ground substance of the intima. The ground substance becomes swollen and after extraction of the fat by the embedding process, it shows the characteristics of mucoid degeneration. The only source for such an imbibition with lipoid is, as Virchow already suggested, the blood plasma itself. The latter nourishes the inner layers of the vessel wall. If the nourishing fluid is abnormally rich in cholesterin, if the lipoids are not completely expressed during contraction of the vessel wall, or if the reticulum cells of the intima are unable to metabolize the cholesterin, lipoidosis of the subendothelial tissue, the first stage of atherosclerosis, will result.

The next step in the development of the disease is the appearance of large cells filled with lipoid. These cells are oval or polygonal, and resemble xanthoma cells in which the fat is diffused in a very fine emulsion. The lipoid is anisotropic and has been chem-

*Read before the Sedgwick County Medical Society, Wichita, Kansas, November 7, 1939.

ically identified as cholesterol ester. In the young, the free lipid in the ground substance diminishes and even disappears in many cases. In infancy and early childhood, the atheromatous process is reversible as it is in the experimental animal. Seldom is there in the first two decades of life, a permanent increase in connective tissue in the intima.

As the body ages, collagen formation becomes evident in the intima. It is a reparative process following injury of the tissue due to fatty infiltration. The older the lesion, the denser the new formed tissue. The variation in color which the intima lesions undergo, the changes from brilliant yellow to silvery white depend on the relative amounts of lipid cells and scar tissue. Even in white scars, a large number of cells filled with cholesterol may be found in the deeper layers of the intima.

The power to metabolize cholesterol grows steadily weaker with advancing years and becomes lost in old age. Large cholesterol filled cells accumulate in masses under the endothelium. Lack of nutrition and necrosis results in the formation of cavities filled with debris of cells and fatty material—the so-called atheromatous abscesses. Necrosis of the cells is associated with a breaking down of the cholesterol esters whereby solid crystals of cholesterol appear. If these atheromatous abscesses rupture into the lumen of the vessel, ulceration and thrombosis of the coronary artery may result.

Calcification occurs in atherosclerotic lesions as a late process. The first deposits of calcium are found often about the nuclei of dying cells. According to Klotz⁸, calcium phosphate forms from the insoluble calcium soaps after liberation of glycerin and crystalline cholesterol. Drops of lipid and calcified granules are often found within the same cell. As the calcium increases, hard plaques of different size may be formed, either encircling the blood vessel, or more often confined to that side of the coronary artery which is adjoining the muscle layer of the heart.

From the histologic examination of the different stages of atherosclerosis it follows that the various lesions are dependent on the relative ability of the reticulo-endothelial cells of the intima to metabolize cholesterol. We find yellow bands in the ascending period of life, hyaline scars in middle life and atheromatous abscesses and calcification in the descending years. The key to the understanding of the whole process is the constant presence of cholesterol in the atherosclerotic lesions.

From experimental, anatomical and chemical studies the conclusion is justified that atherosclerosis is a disease due to disturbance of the cholesterol metabolism. Little is known about the normal cholesterol metabolism and still less about the cause of a

TABLE I CASES OF SUDDEN CORONARY DEATH

Case	Age	Sex	R. Circumflex	Post Desc.	Ant. Desc.	Left Circumflex	Ram. Ventr. Ant.	Ram. Marg. Obus.	Heart	Type of Death
20668	81	M	Moderate stenosis by calcified plaque. Atherom. ulcer	Moderate stenosis by calcified plaque	Fresh thrombus in atherom. ulcer and extreme stenosis by calcification	.....	.....	.....	350 gram. infarct	Sudden
21883	50	M	Fresh thrombus in atheromat. ulcer	.....	Atheromat. abscess. Calcified plaque Moderate narrowing	Marked stenosis by calcified plaque. Old thrombus	.....	Marked stenosis due to calcified plaque	390 gram. infarct	Sudden
21340	52	M	.....	.....	Pinpoint stenosis by fibrosis. No calcification	Extreme stenosis by fibrosis of wall.	.....	Extreme narrowing. Fibrosis of wall	334 gram. infarct	Sudden, following Pettersin
19667	70	M	Fresh thrombus in calcified stenosis	Moderate stenosis. Calcified wall.	Marked narrowing due to calcification	.....	Moderate stenosis due to calcified plaque	Marked narrowing. Calcified wall	296 grams. Rupture on obtuse border	Sudden
23024	50	F	Old thrombus in stenosis due to fibrosis	.....	Elevated yellow plaque	Fibrous occlusion (organized thrombus?)	.....	.....	270 grams. Rupture on obtuse border	Sudden
22326	56	M	Marked stenosis due to calcified plaque	.....	Occlusion by calcification of wall	Marked stenosis. Calcified wall	.....	.....	360 grams. infarct	Sudden

faulty cholesterin metabolism. From experimental studies it appears that thyroxin plays an important role. Murata, Liebig and Menne⁹ were able to show that experimental atherosclerosis by feeding cholesterol, can be prevented by simultaneous administration of thyroxin. Clinical observations are in accord with these experimental facts. In patients with exophthalmic goiter atherosclerosis is extremely rare, while in myxedema it is very common. We know that the cholesterol content of the blood plasma is inversely proportional to the basal metabolic rate. Of interest is also the observation of Dungal¹⁴ based on autopsies, that the people of Iceland have a very small, i. e. well functioning thyroid and at the same time an extremely low incidence of atherosclerosis.

From my histologic studies of autopsy thyroids and from normal basal metabolic rates of different age groups it is apparent that after the thirty-fifth year of life, the thyroid function decreases steadily. This and the fact that in the fourth decade of life coronary sclerosis increases rapidly, is very likely more than coincidence.

The attempt to attack coronary sclerosis by total removal of the thyroid does not appear a rational measure in the light of the facts gained by histologic and experimental studies. More justified would seem to me a restriction of cholesterol-rich food, particularly milk and egg yolk; and a lowering of the blood cholesterol by cautious administration of thyroid extract after the first attack of angina pectoris.

II

Of 1287 autopsies performed at St. Francis Hospital, ninety cases were diagnosed as coronary death. Reviewing the clinical and postmortem findings, I was especially interested in the question why occlusion of a coronary artery will cause sudden death in some cases, while in others, death is delayed several days or weeks following occlusion.

In several instances, I had been unable to find a fresh thrombus in the coronary system when the patient had died of a sudden heart attack, without previous warning. The physician who attended the autopsy was greatly disappointed that an occlusion could not be demonstrated. Then I read a discussion between Cabor and Mallory¹⁰ during one of those famed clinical-pathological conferences in the Massachusetts General Hospital. Cabor asked Mallory: "You say that sudden death in coronary sclerosis can occur without any acute lesions?" And Mallory answered: "Yes. The man who falls over in the street with a heart attack and dies within one to four minutes after the onset of the attack will not show coronary thrombosis. He will always show diseased coronaries, of course. They will be markedly narrow, but not completely occluded. There must be a func-

tional element, perhaps spasm in the diseased vessel, persistent enough to cause death."

In twenty-two cases I dissected carefully all branches of both coronary arteries and examined the lesions histologically. The pathologic findings in each heart were recorded in separate diagrams.

Recent thrombi were found sixteen times, old or organized thrombi six times. Occlusions by calcified plaques were present in thirty-eight vessels. Every heart of this series showed more than one occlusion or marked narrowing of the coronary vessels. In some cases, as many as four lesions were found in a single heart.

The thrombi were located as a rule in atheromatous ulcers. In some sections much calcification was found, while others revealed typical atheromatous abscesses in the intima.

In all our cases, both coronary arteries were involved, but most frequently the more severe lesions were found in the left descending branch, about 2 to 3 cm from its origin. The circumflex branch of the right coronary artery was narrowed in eight instances and occluded by thrombosis in nine cases. Thrombi were found most frequently where the atherosclerotic lesions were most marked, namely thirteen times in the left heart and nine times in the right.

There were fifteen hearts with myocardial infarcts. The most striking fact was that whenever a myocardial infarct was encountered, at least two branches of the coronary arteries supplying the infarcted area were involved. Only two infarcts were found in the right ventricle against thirteen in the left. The posterior wall of the left ventricle was involved in four cases, the anterior in six. In two cases, a recent infarct led to rupture of the heart and resulted in hemopericardium. There were three instances of cardiac aneurysm. The endocardium in the region of the aneurysms was as a rule covered with mural thrombi.

Several cases were encountered of occlusion of a main branch of a coronary artery, but without infarction of the myocardium. This clearly indicates that the regions supplied by the occluded vessel must have received their blood supply from other sources. Gross¹¹ believed that there is an increase of collateral anastomoses with advancing age. Schlesinger¹², on the other hand, was able to show by injecting a multicolored mass into the coronary system, that normal senile hearts have no more anastomoses than young ones; but that anastomoses develop readily whenever and wherever arteriosclerotic narrowing or occlusion causes obstruction in the coronary circulation. These anastomoses are localized to the regions where they are needed.

TABLE II CASES OF GRADUAL CORONARY DEATH

Case	Age	Sex	R. Circumflex	Post Desc.	Ant. Desc.	Left Circumflex	Ram. Ventr. Sin. Ant.	Ram. Marg. Obus.	Heart	Type of Death
18639	68	M	Moderate stenosis. Calcified plaque	Calcified wall.	Fresh thrombus. Atherom. ulcer and calcification	Pinpoint stenosis. Calcified wall.	.....	.....	476 grams. Myocardial infarct left anterior wall	Gradual
19095	87	M	Marked stenosis. Ulceration and calcification	.....	Fresh thrombus in atherom. atous ulcer. Calcified stenosis	Calcified plaque. Moderate stenosis	Marked stenosis due to calcified plaque	Almost complete obliteration by calcified plaque	500 grams. Fresh myocardial infarct, posterior wall, left	5 days after attack
21389	63	M	Organized thrombus. Calcified stenosis	Fatty plaque. Moderate stenosis	Obliteration of lumen by calcified plaque	Marked stenosis. Calcification.	.....	.....	334 grams. Aneurysm, apex of left ventricle. Fresh mural thrombus	Gradual
20663	62	M	Moderate narrowing. Atheromatous plaque	.....	Fresh thrombus	Organized thrombus	.....	Marked stenosis by calcified plaques	510 grams. Aneurysm on apex. Mural thrombus. Fresh infarct in ant. wall, left. Pericarditis	11 days after attack
19447	64	F	Fresh thrombus in calcified stenosis	Calcified plaque	Marked stenosis due to calcification	No stenosis. Calcified wall	.....	Fresh thrombus in atheromatous ulcer	510 grams. Myocardial "abscess" in anterior wall right ventricle Pericarditis	2 weeks after attack
21419	54	M	Atheromatous ulcer. Calcification. Moderate narrowing	Calcified wall. Moderate stenosis	Stenosis due to calcified plaque	Aneurysm with thrombus	.....	Ocluding thrombus	840 grams. No infarct	Severe attacks for 3 months
19774	72	F	Marked stenosis, calcified plaque	Moderate stenosis. Calcification	Fresh thrombus	Ocluded by calcified plaque	.....	.....	456 grams. Fresh infarct, left, anterior wall	One week after attack
21681	76	M	Fresh thrombus in calcified stenosis	Calcified plaque	Extreme stenosis, calcified wall	Anomaly. Absent	.....	Anomaly. Originates from anterior descending branch. Thrombus in calcified stenosis.	570 grams. In left ventricle posterior wall fresh infarct	After prostatectomy. 19 days after attack
22855	63	M	Moderate stenosis. Atheromatous abscess	Occlusion by fresh thrombus	Slit-like stenosis. Hemorrhage in wall.	Moderate stenosis. Fibrosis of wall.	.....	Fatty plaques protruding into lumen.	595 grams. One infarct in left obtuse border, one in posterior wall, left ventricle.	8 days after attack
22010	55	M	Fresh thrombus in calcified stenosis	.....	Marked stenosis calcified wall	Moderate stenosis. Calcification	Complete obliteration. Canalized organized thrombus.	.....	396 grams. Infarct posterior wall, left. Thrombus in right auricle	8 days after attack
23586	71	F	No stenosis. Fatty and calcified plaques	.....	Moderate narrowing due to calcified plaque	Ulcerated atheroma. Calcification	.....	Calcified plaques. No stenosis	460 grams. No infarct	Gradual

TABLE II—(Continued)

Case	Age	Sex	R. Circumflex	Post Desc.	Ant. Desc.	Left Circumflex	Ram. Vent. Sin. Ant.	Ram. Marg. Otrus.	Heart	Type of Death
23514	67	M	Slit-like lumen. Atheromatous ulcer, calcification	.....	Marked stenosis calcified wall	Pin-point stenosis. Calcification.	Moderate stenosis. Calcified wall	.....	700 grams	Gradual
23792	42	M	Thrombus in atheromatous ulcer	.....	Thrombus in calcified stenosis	Narrowing by calcified plaque	.....	Calcified wall. Wide lumen	528 grams. Pericarditis. Murals thrombus. Infarct in right anterior wall and left anterior wall	6 weeks after last attack
22893	77	M	Marked stenosis. Atheromatous ulcer	Anomaly. Originates from left circumflex. Calcified wall.	Marked stenosis. Calcified and fibrous wall.	Thrombus in calcified stenosis.	.....	.....	394 grams. Infarct in left anterior wall. Pericarditis	12 hours after attack
22063	75	M	Thrombus. Calcified stenosis	Occlusion by fibrosis	Calcification and ulceration. Fresh thrombus	Calcified plaque	.....	.....	405 grams. Old aneurysm of apex, left ventricle. Fresh infarct left anterior wall	8 days after attack
23624	67	M	Calcified wall. No stenosis	Calcified plaques, no stenosis	Moderate stenosis, in proximal portion. Occlusion by calcified plaque in distal half	Calcification. No stenosis	.....	Calcified wall. No stenosis	469 grams. No infarct	15 days after heart attack

In our group of sudden death, four died from fresh thrombosis of a main branch of one coronary artery, the main branch of the opposite coronary artery having been already occluded by an old thrombus or atherosclerotic plaque. These patients showed no myocardial infarction, death having occurred before the infarcts could be established. In not a single case, death occurred suddenly as the result of the occlusion of a single main branch. Two of the six cases of sudden coronary death had no thrombus at all. This finding conforms with the experience of Levy and Bruenn that in thirty per cent of sudden coronary death, thrombosis is absent.

There was no case in our series, where sudden increase of work, physical strain or psychic upset could be regarded as direct cause of coronary death. There was also no case where excessive strain or trauma had caused hemorrhage in the coronary wall leading to occlusion of the lumen.

Though the myocardial infarcts were caused by thrombosis or atherosclerotic occlusion, such lesions were not the direct cause of death. These patients survived the coronary occlusion for various lengths of time, but died later of myocardial damage. Except for rupture of the heart muscle, anatomical study fails to explain why a patient dies just at a certain time after coronary occlusion. The hearts from cases of immediate death and of gradual death did not disclose definite differences as to the number, the location or the type of occlusion.

The only striking difference which I found between these two groups, pertained to the size and weight of the heart. In sudden death from coronary occlusion, the average weight of the heart was 333 grams, i. e. normal, while the hearts from patients who had lived days or weeks after the coronary attack, weighed very often over 500 grams. This would indicate that the large hypertensive heart has developed more anastomoses than the heart of normal size.

CONCLUSIONS

My studies of the earliest stages and the final catastrophe of coronary sclerosis bring out the following facts:

1. Coronary sclerosis is not a natural incidence of old age, but is a disease due to a disturbance of the cholesterol metabolism.

2. Since the metabolism of cholesterol depends on the function of the thyroid, removal of the thyroid in the treatment of coronary sclerosis is not a logical procedure.

3. From experimental and histological studies it seems feasible to prevent the dangerous late stages of atherosclerosis by restriction of the intake of cholesterol-rich milk and egg yolk and by cautious administration of thyroid extract.

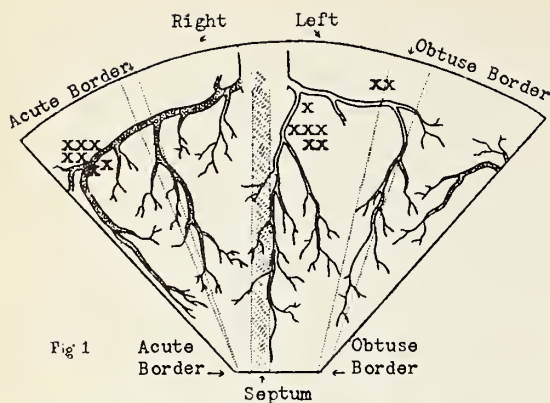


Fig 1. Location of Fresh Thrombi. Seven in right, nine in left coronary artery.

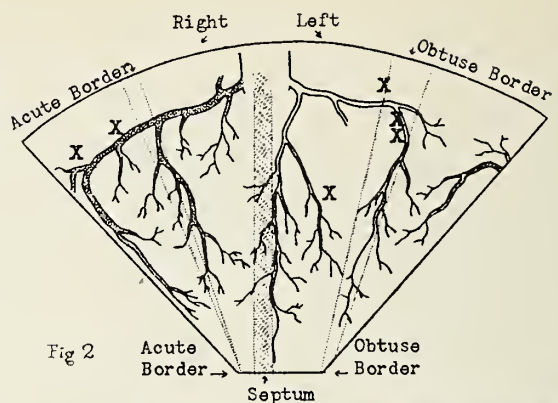


Fig 2. Location of Old Thrombi. Two in right, four in left coronary artery.

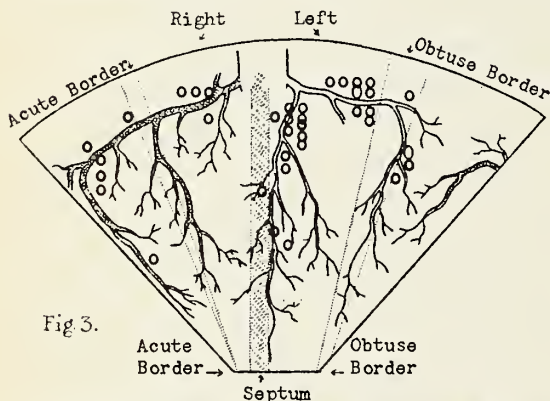


Fig 3. Marked Stenoses by Calcification. Ten in right, 28 in left coronary artery.

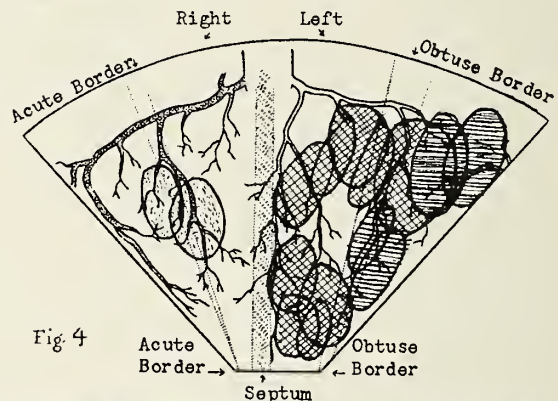


Fig 4. Fresh Myocardial Infarcts. Two anterior wall of right ventricle, thirteen in left ventricle (9 in anterior wall, 4 in posterior wall). Two ruptures of left side.

4. Coronary thrombosis, myocardial infarct and sudden death are not synonyms. Each one may occur without the other.

5. In one third of the cases of sudden coronary death, thrombosis is absent.

6. Death from coronary insufficiency occurs only, when two or more branches of the coronary system are occluded.

7. In our cases of sudden coronary death, without previous warnings, the heart was of normal size, while in the series of delayed coronary death the heart was definitely enlarged.

BIBLIOGRAPHY

1. Ruffer, M. S.: *J. Path. & Bact.* 15:453, 1911.
2. Herrick, J. B.: *J. AMA* 59:2015, 1912.
3. MacCallum, W. G.: *Physiol. Rev.* 2:70, 1922.
4. Moenckeborg, J. C.: *Virch. Arch.* 171:141, 1903.
5. Aschoff, L.: *Lectures on Pathology*. New York, P. B. Hoeber, 1924.
6. Anitschkow, N. and Chalutow, S.: *Cbl. f. Pathol.* 24:11, 1913.
7. Leary, T.: *J. AMA* 105: 475, 1935.
8. Klotz, O. and Manning, M. F.: *J. Path. & Bact.* 16:211, 1911.
9. Menne, F. R., Beeman, J. A. P., and Labby, D. H. *Arch. Path.* 24:612, 1937.
10. Case Records, Mass. General Hospital. *N. Engl. J. Med.* 216:173, 1937.
11. Gross, L.: *The Blood Supply to the Heart*, New York, P. B. Hoeber, 1921.

12. Schlesinger, M. J.: *Am. Heart J.* 15:528, 1938.
13. Saphir, O., Priest, W. S., Hamburger, W. W., and Katz, L. N.: *Am. Heart J.* 10:567 and 762, 1935.
14. Dungel, N. P.: *The Lancet* 230:1354, 1936.
15. Rosenthal, S. R.: *Arch. Path.* 18:473, 660 and 827, 1934.

Court of Appeals rules against Brinkley: "Last week the United States Fifth Circuit Court of Appeals at New Orleans upheld a federal district court decision in the libel suit brought by John R. Brinkley against the editor of *Hygeia*," *The Journal of the American Medical Association* for March 9 says. "The statement of the court in making this decision was as follows:

"We are spared the necessity of discussing the assignments of error in this decision and of reviewing the evidence. It is sufficient to say that the evidence of the plaintiff, placed on the stand by the defendant, tends to show the truth of the statements of fact complained of, and we find no substantial evidence tending to show the defendant was actuated by malice or that plaintiff suffered any actual damage compensable in money."

"In the presentation of its case before the federal district court the American Medical Association revealed a long trail of dubious medical activities on the part of Dr. John R. Brinkley for which there was no refutation. In the meantime he continues to broadcast from his station across the Rio Grande, and the United States Post Office continues to permit him the use of the United States mails."

XANTHOMA TUBEROSUM

REPORT OF A CASE*

Mahlon Delp, M.D.

Kansas City, Kansas

Cholesterol metabolism has long represented a fascinating and puzzling problem to the bio-chemist in his study of fats. Recently, a rather close relationship has been established between various skin manifestations, systemic diseases and disordered metabolism of the entire group of lipids.

The case here reported does not represent a clinical rarity; but the clinical implications to be noted in his symptoms and the therapeutic response make it sufficiently interesting to warrant a brief report.

Thoroughly complete studies of the different clinical groups of xanthomatous diseases have been made by Thannhauser and Magendantz¹, Montgomery and Osterberg², Montgomery³, Gaines⁴, and Sperry and Schick⁵. These reports present illuminating reviews covering bio-chemistry, clinical manifestations, and etiology of the entire xanthomatous group.

Thannhauser¹, has grouped the xanthomatous diseases into three main groups as follows:

Primary essential xanthomatosis

- A. Primary essential xanthomatosis of the hypercholesteremic type.
- B. Primary essential xanthomatosis of the normocholesteremic type.
- C. Primary essential xanthomatosis of the combined type.

II. Secondary xanthomatosis due to lipemia.

III. Localized xanthoma cell formation in true tumors.

This case is one of xanthoma tuberosum falling under the first sub-group in this classification, and presents a picture of the hypercholesteremic variety with skin lesions.

REPORT OF CASE

History—C. H., a white man, married, age fifty-two, a farmer, entered the Out-Patient Department of the University of Kansas Hospitals October 3, 1938. His chief complaints were pain in the "stomach," pain in the feet and legs, and a skin eruption. The family history disclosed that both father and mother died at the age of seventy of cerebral accidents; two brothers died in infancy of unknown causes, and four brothers were living and well. There was no history of diabetes mellitus or of any disease similar to that of the patient. The patient had no children. He had had the usual childhood diseases,

none of which was serious. He reported having had a left maxillary sinusitis six years ago and malaria two years later. Alcohol had been used moderately, but not for several years. Tobacco had never been used to excess. For the past six months the patient ate breakfast cereal and cream, practically excluding all other foods. Drastic cathartics were taken each day. He did not complain of dyspnea, but moderate exertion produced extreme fatigue and an occasional pain in the chest similar to angina. Limitation of activities the past six months was because of pain in the feet and legs. This pain was precipitated by walking, but also annoyed him much at night. Dietary restriction over this period likely accounted for the fifteen pound weight loss. He showed no evidence of nervous system involvement.

Four months before admission a papular eruption appeared on the extensor surfaces of the legs and arms as well as the bottoms of the feet and the palms of the hands. The lesions on the bottoms of the feet added to the discomfort of walking. Medical attention had not been sought until his admission to the dispensary, and all attempts at self-medication had been directed at the gastro-intestinal tract.

Examination—The patient was not acutely ill at the time of his admission. Weight, 150 lbs. The head and neck were essentially negative. The thyroid was palpable, but not enlarged. The chest was negative to examination. The heart was not enlarged; no thrills, no murmurs. The blood pressure was 110 systolic, 70 diastolic. The pulse was normal.

No palpable masses were found in the abdomen. The liver and spleen were not enlarged. Pulsations in the vessels of the feet were very poor. The reflexes were physiological.

Appearing on the extensor surfaces of the arms, the palms of the hands, the knees, the buttocks, and the soles of the feet were numerous small chamois skin-colored papules. These lesions were nodular and very firm. Scattered about over the body were many similar lesions, located at points of pressure and at points where mild trauma had occurred to the skin.

The urine was acid with a specific gravity of 1.013, and showed a faint trace of albumin, and an occasional hyaline cast. The examination of the blood showed a hemoglobin of ninety per cent; 4,930,000 red cells and 9,300 white cells; blood sugar was 110 mg. per 100 cc. of blood; blood cholesterol, 764 mm. per 100 cc. of blood. The Wassermann and Kahn reactions were negative.

The basal metabolic rate was reported as minus thirty-six. The gastric analysis showed an essentially normal curve of gastric acidity.

X-ray examination of the gall bladder by means of oral dye demonstrated a normally functioning gall

*From the Department of Internal Medicine, University of Kansas School of Medicine.

bladder without stones. Fluoroscopic examination of the chest and heart showed nothing abnormal. X-ray examination of the chest and heart showed nothing abnormal. X-ray examination of the legs and feet demonstrated no calcification of the vessels.

A glucose tolerance showed a fasting blood sugar of 88 mg. per 100 cc. blood; first hour specimen, 141 mg.; second hour, 125 mg.; third hour, 80 mg.;

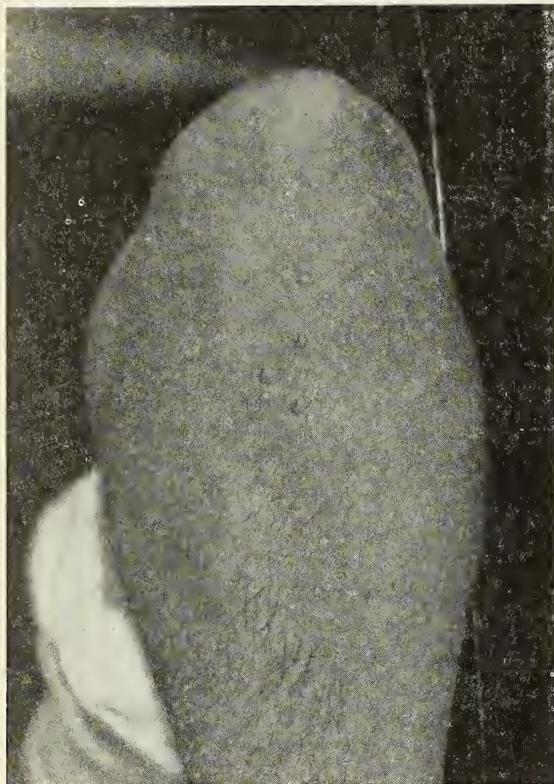


Fig. 1—Photograph of cutaneous lesions

fourth hour, 62 mg. In none of the urine specimens did there appear any sugar.

An electrocardiographic tracing showed a rate of 72 with a left axis deviation. T₁ and T₂ were of low voltage and T₃ plateau.

A biopsy specimen consisting of one of the nodules on the knee was reported cutaneous xanthomatosis.

Course—This patient was first seen October 4, 1938, with the finding of a blood cholesterol of 764 mg. A diagnosis of xanthomatosis of the hypercholesteremic type was made. On October 13, 1938, he was given a vegetable, fat-poor diet, and placed on thyroid extract*, gr. V, three times daily. On October 11, 1938, the blood cholesterol was 765 mg. On October 25, 1938, it was 759 mg. There was a steady decline in cholesterol values from that date until December 8, 1938, as indicated by the accom-

*Burroughs Wellcome & Company, Thyroid gland.

panying chart (Table I). However, there was no change in the patient's symptoms. The skin lesions persisted, and he continued to complain of pain in his legs. On January 5, 1939, the thyroid was stopped, but the patient continued on his diet. On January 19, 1939, he was placed again on five grains of thyroid daily, and was given a regular diet.

Between January 19, 1939, and May 1, 1939, there was some mild improvement, particularly during the last month, even though the patient was on a very liberal diet, including milk, eggs, and cream. During the last two weeks of May, the thyroid was discontinued, and again the blood cholesterol rose to 500 mg. During this time the patient was normally active and worked daily. At the time he discontinued his thyroid only a few isolated skin lesions remained. These promptly began to reappear with the rise in cholesterol. They again faded when a return to thyroid therapy was made. The last blood cholesterol reading was made June 6, 1939, at which time it was 238 mg.

TABLE I
CHOLESTEROL CONTENT OF BLOOD PLASMA
Cholesterol Mg. per 100 c.c.

Date	Total	Cholesterol Esters	Percentage Cholesterol Esters
10/ 4/38.....	764		
10/11/38.....	756	549	72%
10/13/38 Low fat diet and thyroid gr. XV daily.			
10/25/38.....	759	576	75%
10/27/38.....	735	486	66%
10/31/38.....	609	498	81%
11/ 3/38.....	516	327	63%
11/10/38.....	309	180	58%
11/17/38.....	211	138	63%
11/28/38.....	181	116	64%
11/28/38 Put on liberal diet and thyroid gr. X daily.			
12/ 1/38.....	198	123	62%
12/ 8/38.....	179	125	69%
1/ 5/39.....	297	195	65%
1/ 5/39 Discontinued thyroid. Liberal diet ordered.			
1/19/39.....	426	304	71%
1/19/39 Thyroid gr. V daily, continued liberal diet.			
2/ 2/39.....	268	178	66%
2/26/39.....	229	148	64%
5/ 1/39 Off thyroid two weeks. Liberal diet. Put on thyroid gr. X daily.			
5/ 1/39.....	500	337	67%
6/ 6/39.....	238	178	74%

COMMENT

While essential xanthomatosis can hardly be regarded as a rare disease, the case which we have described is of interest because of the skin lesions, the high blood cholesterol, the evidence of vascular changes with intermittent claudication and anginal pain, and because of the prompt response to diet and thyroid extract. The presence of the skin lesions with the high cholesterol value stamps it as belonging to the essential or primary group of disorders of lipid

metabolism as classified by Rowland⁶, Pick⁷, and Thannhauser¹.

Hypercholesteremic states, secondary to other diseases such as lipoid nephrosis, diabetes mellitus, myxedema and extensive arteriosclerosis, occur frequently. They are not, however, characterized by xanthomatous skin lesions. Occasionally in diabetes mellitus when there is a marked disturbance in lipid metabolism typical xanthoma diabeticorum appears. Major⁸ has reviewed this subject and reported a group of typical cases.

No great amount of clinical attention has been given to the fact that occasional patients with essential xanthomatosis and high blood cholesterol values manifest symptoms of vascular disease. Ochsner and Conner⁹ report such a case with a review of the literature and pathological findings to confirm their

values does not prove hypothyroidism the etiological factor. We consider the patient to belong to the hypercholesteremic type of primary xanthomatosis.

This patient will continue under observation, and more complete studies will be made, particularly on cholesterol excretion following therapy.

BIBLIOGRAPHY

1. Thannhauser, S. J. and Magendantz, Heinz, The Different Clinical Groups of Xanthomatous Diseases, A Clinical Physiological Study of twenty-two Cases, *Annals of In. Med.* 11: 1662-1746, March 1938.
2. Montgomery, Hamilton, and Osterberg, Arnold E., Xanthomatosis, Correlation of Clinical, Histopathologic, and Chemical Studies of Cutaneous Xanthoma, *Arch. Dermat. and Syph.* 37: 373-402, March 1938.
3. Montgomery, Hamilton, Xanthomatosis, III. Cutaneous Xanthoma, especially in relation to disease of the liver. *Journal Investigative Dermat.* 1:5, 325-351, October, 1938.
4. Gaines, M. T., Xanthomatosis with Report of Case, *South, M. J.* 489-496, June 1933.
5. Sperry, W. M., and Schick, Bila, Essential Xanthomatosis: Treatment with cholesterol-free diet in two cases, *Am. J. Dis. Child.* 51: 1372-1384.
6. Rowland, R. S., Anomalies of lipid metabolism, 1930, Oxford Medicine, Oxford University Press, New York, pp. 3-109.
7. Pick, L. I. A classification of diseases of lipid metabolism and Gaucher's disease (Dunham lecture), *Am. Jr. Med. Sci.* 1933, CLXXXV, 453-469.
8. Major, Ralph H. Xanthoma Diabeticorum, *The Johns Hopkins Hospital Bulletin*, Jan. 1924, XXXV, 27.
9. Ochsner, Harold C., and Conner, Milton H., Lipemia Accompanied by atheromatous and occlusive vascular disease, Report of a case and partial review of the literature, *Ann. Int. Med.*, 10: 258-269, Aug., 1936.

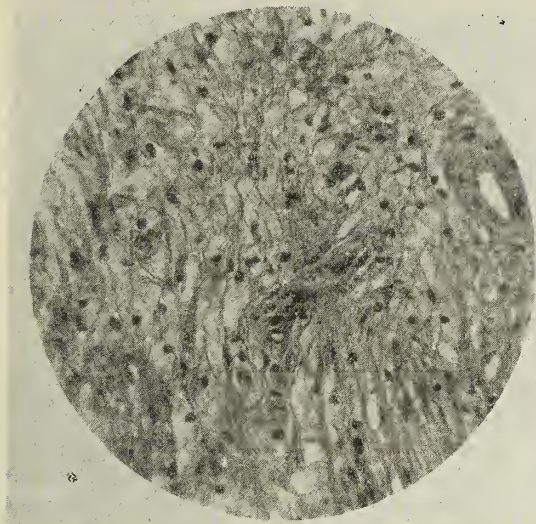


Fig. II—Microscopic section of cutaneous lesions

diagnosis. Montgomery and Osterberg² state that in xanthoma tuberosum severe cardio-vascular damage, especially coronary sclerosis and intermittent claudication, is frequently found.

The case reported here, after being placed on thyroid extract and a low fat diet, showed prompt decreases in blood cholesterol values. There was also an associated involution of the skin lesions. Such responses are apparently not universal. Sperry and Schick⁵, report a similar case in which a child did not respond to a cholesterol free diet. The cholesterol values, however, in their case were not initially as high as in this case. The B. M. R. of minus thirty-six might suggest hypothyroidism, but the patient lacked the usual clinical evidences.

It is our opinion that simply because thyroid extract aided so greatly in reduction of these cholesterol

OBSERVATIONS ON THE EYES DURING METRAZOL TREATMENT*

Lyle S. Powell, M. D.

Lawrence, Kansas

Marshall E. Hyde, M. D.

John Russell, M. D.

Osawatomie, Kansas

This study reports the detailed observations on patients during metrazol treatment of Schizophrenia. This is one of a group of studies carried out for the observation and determination in greater detail of the nature of the reactions to this form of treatment. Due to the convulsive nature of these reactions, intraocular observations are considerably more difficult than during insulin "shock" treatment. However, such observations as are possible are considered particularly pertinent because of the close communication and similarity of the ocular vascular supply and the blood supply of the brain, and the effects on the central nervous system, especially as shown by the pupillary reactions.

SECTION B: Observations on Metrazol Patients.

A plan similar to that previously reported** for

*From the Department of Ophthalmology, Osawatomie State Hospital, Osawatomie, Kan.

**Journal of the Kansas Medical Society, February, 1940. Page 55.

TABLE III
OBSERVATIONS—METRAZOL PATIENT

M.B., 23.

Room: Semi-darkness.

Time	T.	P.	R.	B. P.	Pupil Size	Tension Brailliart	Comments
11:00	98.8	104	16	130/80	5 mm.	20/21	Discs small and round. Fundi entirely normal except for pigmented spots in left disc. Pupils equal, round and regular and react normally to light.
11:23					5 mm.		10 c.c. of 10 per cent sol. metrazol intravenously.
11:23:10					2 mm.		Pupils suddenly contract, do not react to light. Pupils gradually expanding under strong light. Immediately after the injection the patient said, "I feel like I am going to faint." The seizure followed at once. Pupils still expanding.
11:24					2 mm.		Convulsion ended. Pupils constricted. No reaction to light. Involuntary urination. Was able to observe the retinal circulation in the neighborhood of the disc first in left eye, then in right, and could note no change whatever in vessels, retina or media.
11:24:15							Wide lateral nystagmus with components of same intensity in both directions.
11:29	99.6	120	32	130/60	5 mm.	uncoop.	Pupils react uncertainly to light.
11:30							Confused and mildly excited.
11:32						uncoop.	Skin is moist but no beads of perspiration.
11:34					6 mm.		Face flushed, still in state of confusion. Pupils equal, round, react slightly to light.
11:35							Considerable flushing of entire skin, especially on back and shoulders, confusion persists.
11:36							Patient assumes catatonic positions of hands and exhibits some ataxia. Picking at bedclothes.
11:37							Continually moving; speech is slurred and incoherent. Patient jabbering continuously and continues purposeless movements of the hands and legs.
11:38							Picking at bedclothes. Patient quieter, sitting up in bed, looking about, exhibiting some curiosity; looks from one person to another attempting to recognize them. Flushing persists, especially on back and shoulders and back of neck. Skin still moist. Patient laid down.
11:39					6 mm.		Pupils inactive to light and slightly irregular in contour. Echolalia.
11:40							Patient incoherent and uncooperative; no change in eye grounds. Intraocular circulation apparently normal. Echolalia.
11:41					6 mm.		Pupils react slightly to light and still slightly irregular in shape. Skin still moist.
11:42							Small beads of perspiration appearing on face.
11:45						15/20	Patient continues to perspire. Beads of perspiration on face, especially on upper lip. Both anterior chambers appear considerably deepened. Moderate degree of irregularity of pupils persists.
11:46							Patient answers questions coherently. Still repeats statements over and over again, but does this to a certain degree when not under treatment. Patient says mouth feels dry in answer to question. Flushing of neck and shoulders beginning to subside.
11:49							Patient restless and wants to get out of bed. Says her throat hurts.
11:51		124		148/76			
11:55	99.4				6 mm.		Patient still perspiring but not flushed. Pupils round, regular, but very sluggish to light. Still makes purposeless movements but does not pick the bed clothing and exhibits no ataxia. Babinski negative.
11:57						22/20	Eye grounds perfectly normal. Patient perspiring less freely and is entirely quiet in bed.
12 Noon					6 mm.		Patient dismissed and allowed to leave the room. Exhibits no ataxia and gait is normal; no nystagmus. Eye grounds normal. Anterior chambers have apparently returned to normal depth. Pupils equal, round and regular. Respond to light and accommodation.

TABLE IV
OBSERVATIONS—METRAZOL PATIENT

J.G., Age 24.
Room: Semi-darkness.

Time	T.	P.	R.	B. P.	Pupil Size	Tension Brilliart	Comments
1:25 p.m.	99	96	28	150/88	6 mm.	20/21	Eye grounds and media normal. Pupils equal, react to light. Right pupil slightly irregular in shape, left pupil round. Sclera clear. Patient is calm, cooperative, answers questions coherently.
1:29:15							12 c.c. of 10 per cent metrazol intravenously.
1:29:25							Onset of seizure. Pupils contracted, then gradually dilate.
1:30:20					3 mm.		End of seizure. Patient had hard epileptiform seizure. Pupils contracted.
1:30:58							Spasm marked. Pupils contracted, do not react to light. Pupil dilating. Spasm is less marked. Patient twitching. Sclera clear.
1:31					6 mm.		Pupils do not react to light. Slightly cyanotic. Patient quiet now, stertorous breathing. Pupils contracted again. Pupils are dilating and contracting alternately. Eye grounds observed from the time of the clonic spasm until patient lapsed into the passive state. No changes observed.
1:34							There is some ruffling of the epithelium of the left cornea, resembling cocaine ruffling.
1:35					4 mm.		No reaction to light. Patient breathing stertorously and making to and fro movements with his hands.
1:35:40						25/30	Patient removed gag from mouth. Seminal emission at end of clonic seizure.
1:36					4 mm.		Cyanosis gone. Pupils do not react to light. Patient restless. Corneal epithelium clear and smooth. (Right eye.)
1:36:15							Slight ruffling of corneal epithelium persists. Left eye.
1:36:45							Pupils are alternately contracting and dilating.
1:37							No reaction to light. Patient moaning and appears to move about in bed. Skin moist, breathing somewhat stertorous.
1:38							Patient beginning to flush considerably on face and neck.
1:39			24				Making purposeless movements with both hands. Patient very moist, covered with perspiration, face flushed; quiet in bed. Respiration is regular.
1:41						20/20	There is some deepening of the anterior chambers in both eyes.
1:42					5 mm.		Patient very restless and beginning to respond some to questions.
1:43							Pupils sluggish to light.
1:45							Patient still restless. Eye grounds entirely negative. Media clear in both eyes.
1:46							Cornea is clear in both eyes, ruffling of corneal epithelium of left eye has entirely disappeared. Patient very restless, attempting to get out of bed. Patient confused, sitting up, attempting to recognize people. Responds to request to recognize people. Responds to request to lie down, and attempts to be cooperative.
1:47							Two small sub-conjunctival hemorrhages occurred during the clonic spasm in the upper outer quadrant of the left eye.
1:48							Remains very moist and very flushed.
1:49		120		154/70			Still a little restless and confused. Excitement still persists.
1:53							Still perspiring and restless, attempting to get out of bed.
1:55							Patient up and out of bed and taken to the toilet, but is still somewhat confused.
1:57							Returns to bed and says he has a headache when questioned as to how he feels. Still moist and a little flushed.
1:59							Patient complains of frontal headache.
2:00					6 mm.		Pupils react sluggishly to light. Patient quite cooperative now, entirely quiet while in bed. Corneal epithelium, media and fundi entirely normal.
2:02					5 mm.		Pupils unequal, both react sluggishly to light, then dilate again under strong light.

TABLE IV—(Continued)

Time	I.	P.	R.	B. P.	Pupil Size	Tension Brailliart	Comments
2:03					6 mm.		Patient moving arms and feet about in bed, but not violently, as he did 10 minutes ago.
2:04						22/22	
2:05	99	116	26	160/70			Speech is little slurred but not repeating phrases. Patient has tendency to assume catatonic postures. Answers questions readily but with slight slurring. Heart rate full and regular, no arrhythmia or other pathological signs noted. Patient cooperates.
2:09							Patient lying quietly in bed, skin still moist, flushing of upper extremities continues.
2:10					6 mm.		Pupils round and regular, except for the slight irregularity that has been observed in the right eye previous to convulsion. Pupils react to light, but immediately dilate again under strong light. Left pupil remains about 1 mm. wider than right. No reaction to accommodation.
2:12							There is some puffiness under each eye and some diffuse swelling of the subcutaneous tissue of the entire face.
2:13							Babinski negative. Oppenheimer negative. There is no cremasteric response. No abdominal reflex. Patient has assumed catatonic position with both hands and arms which he has held for the past several minutes.
2:14							Knee jerks slightly hyperactive. No reaction to percussion on extensor tendons. The flexor reflex is hyperactive in left, but no response in the right.
2:16							Right pupil remains smaller than left, both pupils react sluggishly and incompletely to light and then dilate somewhat but not as completely as at previous observation.
2:17					6 mm. 7 mm.		There seems to be muscular lassitude as evidenced by patient's inability to squeeze very hard in handclasp; right squeezes harder than left, but neither normal amount.
2:20							Thermal reactions normal, both as to temperature and location on lower extremities.
2:21						21/21	Retinal veins somewhat engorged, both eyes have assumed a 4:2 ratio. Otherwise fundi and media are entirely negative.
2:23							Corneal epithelium normal. Pupils react normally to light and accommodation, but the left pupil remains 1 mm. wider than the right.
2:24							Patient responds correctly to questions and repeats 6 digits in succession but still speaks with considerable slurring.
2:25							Babinski negative, Oppenheimer negative, knee jerks markedly hyperactive. No cremasteric reflex; no abdominal reflex; no extensor reflex. No flexor reflex. Crummer's sign markedly positive.
2:28							Patient still assumes catatonic attitudes, still some flushing of face and diffuse subcutaneous swelling.
2:29							No flexor or extensor reflex. Pupils equal in size and round, except for the previously described eccentricity of the right pupil. Reaction is normal to light and accommodation. Patient still speaks with slur. Remains very sensitive over the mastoids. No cremasteric, but slight abdominal reflex.
2:30							Babinski negative on right, no response whatever on left.
2:31							Oppenheimer negative on both sides. Knee jerks remain markedly hyperactive.
2:32							Patient still assumes catatonic postures.
2:33							Speaks with slight slurring which seems to be gradually improving.
2:35							Only the slightest suggestion of abdominal reflex. Babinski both negative. Cremasteric negative.
2:37	99.6	90	18	130/70		20/20	Patient still assumes catatonic position.
2:39					6 mm.		Pupils equal, regular and react to light and accommodation. Suggestion only of abdominal reflex; no cremasteric reflex; Babinski negative on both sides.

TABLE IV—(Continued)

Time	T.	P.	R.	B. P.	Pupil Size	Tension Bailliart	Comments
2:41							Speech is improving, altho still slightly slurred.
2:43				130/70			Blood pressure checked in both arms. Speech is improving, but still slightly slurred. Ophthalmoscopic examination entirely negative.
2:45							Patient out of bed and allowed to go to room; no ataxia, dizziness or diplopia.

insulin "shock" patients was also carried out with metrazol patients. These patients were chosen at random from among those receiving this sort of treatment.

A brief resume of the metrazol treatment for each patient is presented immediately preceding each table.

M. B., age twenty-three. A white female, who has been classified as Catatonic Schizophrenia. She is in good physical condition and her mental condition has been stationary for many months. She has shown no improvement on any previous plan of therapy. Symptoms of Schizophrenia have been present for four and one-half years, and she had maintained a hospital residence for four years and two months when metrazol was started. At the time of this study the patient had received a total of nineteen injections of metrazol and had had sixteen strong epileptiform seizures. There has been no gain in weight and no noticeable improvement in her mental condition.

On the occasion of the present study, preliminary observations were made from 11:00 to 11:20 a. m. and the patient received 10 cc of 10 per cent metrazol solution intravenously at 11:23. This was followed by the onset of a strong epileptiform seizure ten seconds later which lasted for approximately fifty seconds and was followed by prompt onset of respiration. Breathing was definitely stertorous in the beginning. Observations made during this study on this patient are recorded in Table III.

J. G., age twenty-six, is a white male who has been classified as Simple Schizophrenia. He had shown definite symptoms of mental disease for about sixteen months and had been a patient in the hospital for approximately four months at the time metrazol treatment was started. At the time of this study, this patient had been receiving metrazol for ten weeks and had had a total of thirty-two injections with twenty-one strong epileptiform seizures. He has shown moderate improvement mentally and is in very good physical condition.

This patient received 12 c.c. of ten per cent metrazol solution at 1:29:15 p. m. with resultant onset of a hard epileptiform seizure at 1:29:25 p. m. This convulsion lasted for fifty-five seconds. It was pre-

ceded by coughing and was in turn clonic-tonic, then clonic in nature. Patient started breathing promptly after the seizure.

Observations are recorded in Table IV.

COMMENTS ON METRAZOL RESULTS

We have presented the temperature, pulse, respiration and blood pressure determinations during metrazol treatment. With this, we have presented some detailed observations on the eyes. These include observations on the size and activity of the pupils, the intra-ocular tension as determined by Bailliart's tonometer, the changes in the external appearance of the eye, and any changes in either the media or fundi.

These changes are briefly summarized as follows:

M. B. Definite constriction of the pupils from 5 mms. to 2 mms. in diameter occurred, with the onset of the seizure. During the seizure the pupils were observed to gradually dilate. At the end of the convulsion they were again contracted. At this time ophthalmoscopic examination disclosed no change in retinal circulation or media. Shortly thereafter there occurred a wide lateral nystagmus with components of equal intensity in both directions. At this time the pupils did not react to light.

Six minutes following metrazol administration and approximately five minutes after the end of the seizure the pupils were beginning to react to light and had returned to 5 mms. in diameter, which was the same as before metrazol administration. Nine minutes after the injection, the patient began perspiring and two minutes later was perspiring rather profusely. Her face was definitely flushed and the pupils were 6 mms. in diameter and reacted slightly to light. Seventeen minutes following metrazol injection retinal circulation was entirely normal in every way, media were clear and ophthalmoscopic examination was entirely negative. At that time the patient was uncooperative, incoherent, and during this period it was impossible to make tension determinations. Twenty-two minutes following metrazol injection there was definite deepening of both anterior chambers and at that time a moderate degree of irregularity of the pupils. Tension at that time was 15/20 (Bailliart). Thirty-seven minutes follow-

(Continued on Page 128)

PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

I would like first to discuss with the membership for a few minutes the National Physicians Committee for the Extension of Medical Care. The American Medical Association has established for itself a certain standing and is classified as a scientific and philanthropic association and as such enjoys certain exemptions and privileges. If they were to engage in the program that is contemplated by the National Physicians Committee, they would stand a very good chance of losing their present classification. Furthermore, the National Physicians Committee can accept support from sources that the American Medical Association dare not consider. After considerable study and after considerable discussion it was decided that a separate organization could handle this program very much more effectively than could the American Medical Association. I share in this opinion and am sure that the National Physicians Committee has a legitimate field. It can carry on its program very much more effectively as an independent organization. Furthermore, I am sure that the interests of the profession can be served best by the American Medical Association maintaining its present standards and its present dignified position. The National Physicians Committee can carry forward the educational work that is contemplated. Therefore, I desire to recommend to the membership of The Kansas Medical Society that they as individuals support the National Physicians Committee. I am sure that this support should be as individuals rather than to have the support given by county medical societies or other component units of the state Society and therefore component units of the American Medical Association. The larger the number of individuals of the profession that support this Committee, the more effective will be the work of the Committee.

I desire to again call to your attention the contemplated week long cancer program. It will be held March 25 at Pittsburg, March 26 at Sterling, March 27 at Dodge City, March 28 at Hays, March 29 at Clay Center, and March 31 at Holton. The speaker will be Dr. Maurice V. Lang, of the Barnard Skin and Cancer Hospital, St. Louis.

May I urge that every member of the profession give to the Women's Field Army all the encouragement and support possible during their enrollment drive for the month of April.

Yours very truly,

C. C. NESSELRODE, M.D.

EDITORIAL

ACUTE EMPYEMA THORACIS

Modern surgical thought concerning acute empyema thoracis dates from the work of Graham and Bell and from the report of The Empyema Commission. Graham and Bell published the report of their work in an article entitled "Open Pneumothorax, Its Relation to the Treatment of Empyema" in *The American Journal of Medical Science* in 1918. There soon followed the report of the Empyema Commission, based on an intensive study of the cases of empyema occurring at Camp Lee, Virginia, during the influenza epidemic of 1918-19. The basic principles of etiology, pathology and treatment were set forth so clearly and concisely in these two contributions that in the twenty years that have passed little of fundamental knowledge has been added to the subject.

The findings of the Empyema Commission emphasized the fact that in the treatment of acute empyema it is necessary to distinguish between two large groups of cases. First, those in which a suppurative process occurs in the pleura after the pneumonic inflammation has subsided. This is known as metapneumonic empyema, and is usually of pneumococci origin. The second group, those in which the pleural and pneumonic infections occur concomitantly is recognized as synpneumonic empyema, and is usually of streptococcus origin. The report of the Commission contained a chapter on pleural exudate, in which it was shown that in the metapneumonic variety the fluid is thick and contains a large amount of fibrin, while in the synpneumonic variety the fluid is either serous or hemorrhagic, containing only flakes of fibrin and relatively few leukocytes.

In the work of Graham and Bell it was shown that early in the course of streptococcal or synpneumonic empyema the mediastinum retains its normal characteristics; it is more or less freely movable to such an extent that a unilateral pneumothorax causes pressure changes of considerable degree in the contralateral side. They demonstrated that the amount of change is dependent upon the size of the opening in the thoracic wall. A normal individual is able to

tolerate a relatively large opening, while an individual who is suffering from a pneumonic process and whose vital capacity is markedly decreased as a result of it can tolerate a relatively smaller opening. These authors pointed out the important fact that in the metapneumonic process the mediastinum is fixed by the inflammatory reaction resulting in thickening of the structures and because of this there is not the danger of producing pressure changes in the opposite pleural cavity.

The important point in every case of pneumonia is to type the sputum and become aware of the fact if the case is of the streptococcal variety. When pleuritic fluid is demonstrated it should always be subjected to bacteriological examination. Early open drainage in synpneumonic empyema invites an early and disastrous termination for the patient.

Recent advances in the treatment of pneumonia give high promise of reducing the relative number of cases of empyema. The dramatic response of many pneumonia patients to the administration of chemotherapy is likely to lead to carelessness in diagnosis and treatment. Serum therapy should be used in conjunction with chemotherapy. Empyema will continue to be a complication of pneumonia, and careless, unscientific diagnosis and treatment is a disregard of the scientific advancement that has been made.

MEAT INSPECTION

Meats were for a long time the source of much disease among human beings in various parts of the world. Dr. Mohler, Chief of the Bureau of Animal Industry, has called attention to the fact that there are seven diseases transmissible from cattle to man, namely, tuberculosis, anthrax, contagious abortion, hoof and mouth disease, rabies, cow-pow, and actinomycosis. There is also one parasite—the beef tape-worm. There are also diseases of other animals such as trichinosis which may constitute a serious problems in the human family.

The first legislation providing for meat inspection was passed by the Congress of the United States in 1890. The first phase of inspection pertained to dressed beef for export. Next came the microscopic examination of the muscle of hogs for trichina. This

was so reassuring to foreign countries that Denmark, Austria, France, Italy, and Germany removed the ban which had been placed on importation of pork from America.

Before the days of Federal meat inspection, animals being taken to market for slaughter were known to have fallen on the highway and could not rise because of weakness from disease. Those found dead in cars on arrival, as well as those which had received broken bones through shipment were still sold for human food.

Today the Division of Federal Meat Inspection, under the Chiefship of Dr. E. C. Joss of the Bureau of Animal Industry, constitutes the largest service of this kind in the entire world. It employs 836 highly trained veterinarians engaged in Federal meat inspection. There are also 1,471 lay inspectors especially trained to assist in this work and twenty-one experts in chemistry, pathology, and other laboratory work.

In 1938 the carcasses of approximately 66,000,000 animals, including cattle, sheep, goats and horses, were inspected. More than 23,000 were condemned on antemortem examination and on postmortem examination 202,000 were condemned to the rendering tanks.

The Division of Meat Inspection also certifies meat for export and inspects meats offered for entry into the United States. For example, in 1938 more than 43,000,000 pounds from Argentina passed Federal inspection but nearly all of this was in the form of canned or cured meats. During the same year, 2,000,000 pounds of meat from various countries was refused entry into this nation because of unsoundness, mis-labeling, defective canning, presence of prohibitive preservatives, etc.

The present cost of Federal meat inspection, which is paid by taxation, is one cent for each fifty pounds. On a per capita basis this amounts to three to four cents a person per year.

An unfortunate fact is that our Federal meat inspection applies to only two-thirds of the animals slaughtered in this country. The present laws exempt from inspection meats butchered by farmers, local butchers, and meat dealers who make only interstate shipments in serving their own customers; in other words, one-third of the meat consumed in this

country is not inspected and, therefore, very bad situations may exist with reference to the slaughter of animals known to be definitely diseased, as well as those which have disease unsuspected during life. It is unfortunate that our present laws do not provide for inspection of all meat in each state. Even animals slaughtered by farmers for family consumption should be inspected by trained veterinarians and such inspection should apply to local butchers and all who place meats on the market.

With so much that is known about the dangers of meat foods that are not properly inspected, it seems almost unbelievable that we as a people should allow one-third of all meats to be consumed in this nation without inspection. For more than fifty years the veterinarians of this country have put forth much effort to bring about the best possible arrangement for inspection of meats. Every physician can help in his community by supporting the veterinarians and encouraging the enactment of laws which will guarantee adequate inspection of all meats. — *The Journal-Lancet*, August, 1939.

MEDICAL ECONOMICS

(Editor's note: The Editorial Board takes pleasure in publishing the following paper which was presented by Mrs. Irene Meeker, member of the Kansas State Board of Social Welfare, at the 1939 meeting of the Kansas State Nurses Association held in Wichita on October 27th. The Board feels that the article is a particularly able and interesting presentation of a worth while public health and social welfare concept.)

SOCIAL WELFARE AND THE NURSING PROFESSION

Mrs. Irene Meeker

Topeka, Kansas

I deeply appreciate the opportunity afforded me by your organization to discuss with you social welfare, and the allied fields of public health education, and nursing service in Kansas.

The nursing profession, along with social welfare, is one of the few professions wherein service to humanity is primary to that of economic gain. For that reason it is held in high regard throughout the entire nation.

It is also noteworthy that nursing has become an

important part of medical service, and because of this the standards of nursing care have kept pace professionally with the increasingly higher standards of the medical profession. Such a procedure has made itself felt in the great progress which has been made in this country in the field of medical care.

According to reliable vital statistics only three diseases, cancer, heart disease, and nephritis, have shown any appreciable increase during the past twenty-five years. During the same period of time, including the depression years and regardless of the fact that much propaganda has been disseminated to the contrary, the span of life has increased, illness has decreased, and conditions generally pertaining to sanitation have been improved.

For those of us who are interested in securing higher standards in other fields of public service, it is invaluable for us to be in a position to point to the medical and nursing professions as positive proof of the fact that standards of service increase in direct proportion to the standards of personnel within the profession.

Social welfare as a profession is, comparatively speaking, in its infancy. Until the last few years social work has been associated with a relatively small group of persons characterized as Lady Bountifuls with fat purses who went around "doing good" to people. The recipients of such services were, for the most part, that group of unfortunates who were in need of material assistance and toward which the state recognized no responsibility beyond the provision of the barest of necessities.

As the recognition of the causes of dependency have been brought to light and have been found to include breakdowns in all areas of life, the importance of the remedial values of social service have been brought into bold relief. Pioneering in the broader aspects of social welfare has, until the depression years and the era of so-called emergency relief, been confined almost solely to the private agency field.

Along with the acceptance of the responsibility of dependent citizens as a governmental function, as crystallized in the passage of the Federal Social Security Act, has gradually developed the importance and need of high standards of personnel to administer this increasingly important governmental function.

In the vanguard of the fight for higher standards of social work have been the American Association of Social Workers and the American Association of Schools of Social Work. The success of their efforts has been apparent in the standards of personnel set by the Federal Social Security Board and the various social welfare boards of the individual states.

As years of practical experience and more recent scientific research have contributed to our understanding of social problems, their causes, and possible solutions, the groups associated in the work have gradually acquired professional status. Simultaneously, as the broader implications of social work have been realized, it has become increasingly evident to what extent social work overlaps and is dependent on other sciences, such as sociology, nursing, medicine and psychiatry.

At no point is this dependency and overlapping better illustrated than in the relationship existing between nursing and social work. Social workers have become more and more aware of the tremendous effect which physical disability and disease has played in the causation of social dependency. As a result, the use of medical service has become indispensable to all adequate social welfare programs both public and private. It is interesting to consider the phases of activity where the nurse is now indispensable in that program, and to theorize in regard to the future expansion which will undoubtedly occur in that field.

As the nurse has come to serve as a liaison agent between the doctor and the patient, so she is increasingly being recognized in a similar capacity between the social worker and the client. One area where this is particularly true is in the field of public health. The public health nurse has long been recognized as one whose duties entail more than the dissemination of public health information. As she comes to assist people in the handling of their physical disabilities she often finds herself placed in the role of confidant, family advisor, and general counselor on many problems far removed from medical needs.

Such a relationship is both a privilege and a responsibility. The privilege lies in the opportunity to be of service and the responsibility to be able to prepare one's self to handle adequately the demands made by the client. It is the responsibility of the public health nurse to find and report conditions and achieve results by bringing together the need and the available community resources.

In many categories of social welfare, notably in the field of service to crippled children and service to the blind, the nurse is recognized as an indispensable part of the program. In maternal, child health, and child welfare programs, the nurse occupies now, and will continue to occupy a position of increasing importance.

In vocational rehabilitation, which is available in every state except Kansas, the nursing profession makes an outstanding contribution. It is the hope of the State Board of Social Welfare that the time

is not far distant when vocational rehabilitation will become a part of the social welfare program of the state.

In addition to these special categories of public assistance the importance of nursing service is recognized in all indigent and general assistance programs which serve the family unit.

Social workers are constantly dealing with problems wherein physical disability, care and guidance of the sick, sanitation, and public health are important factors. The services of doctors and nurses have been constantly sought and utilized.

The recognition for the need of a close relationship between these professions and the social work group is illustrated by the comparative recent development of a specialized phase of social service classified as, medical social case work. The development of this particular phase of service has been furthered by the social work group and is evident proof of the dependency which social workers feel on the medical and nursing professions. As time goes on no doubt many nurses will see fit to make invaluable contributions in the medical social service field.

As physical well being is recognized as a necessity in problems of emotional stability and social adjustment, it is retroactive that mental health and social adjustment are important factors in convalescence from physical disability. It is necessary, therefore, for the nursing profession to continue its excellent assistance in this field, and for nursing organizations to continue to study social problems in order to make their professional advice and counsel available to the total social welfare field.

Medical standards and services have been constantly raised through the untiring efforts of the leaders of the professions interested in that work. The raising of standards has improved medical service to such an extent that an adequate health program is now recognized as a necessity by every community. No group has shown itself to be more anxious to make an adequate health service available to all classes of people than have the medical and nursing professions.

Because physical well being is recognized as a basic necessity for the American people there has been agitation from some sources that government should provide medical services as it now provides food, clothing, and shelter. Along with demands for socialized medicine has come implications of evils such as, bureaucracy, politics, and regimentation injected into professions which, up to the present time, have been entirely free from governmental regulation. If the very apparent evils of so called socialized medicine are to be averted, it is important that the best minds of the medical and allied pro-

fessions shall meet together and continue formulating forward looking plans which keep pace with our needs and our increasing ideals of social welfare.

One reason for the rapid strides which medicine has taken in recent years, is that private initiative and freedom of research have in no way been curtailed by lay or regimented control. It is necessary, therefore, that whatever plans are undertaken to furnish medical service, that laws at all cost, should protect the freedom of the present system, and the realization that things medical must be handled by medical persons should be emphasized. There isn't any question but that nursing, hospital, medical, and other allied professions have accomplished excellent results in obtaining standards in the entire field of medical and nursing care. We must not permit the American public to be propagandized to a point whereby public opinion will be crystallized to bring about legislation for governmental regulations and governmental control of medical services.

I am of the opinion that all interested lay groups should place emphasis on public health education, good public health laws, and the importance of medical aid for the indigent, and beyond that should leave the profession entirely free to continue the development which has marked its phenomenal progress through these years. I firmly believe that the nursing profession and other interested organizations should strive to bring these important facts to the attention of the public in order that informed citizens may be in a position to avert what might well be termed a public health tragedy.

As one who is charged with the major responsibility of directing the administration of public assistance and social welfare services in this state, I have been interested in the past accomplishments of the nursing profession to a degree, secondary only, to my desire to see future progress for that profession. The possibility of utilizing some of the state hospitals as official training centers for nursing education has been suggested. This seems possible, particularly in the state hospitals charged with the responsibility of medical care for mental patients. I personally have manifested interest in the suggestion and feel if such a plan of affiliation could be worked out it would represent an invaluable contribution to psychiatric nursing education.

We hear a great deal about the subject, community cooperation. As experience and research have pointed out the many divergent factors contributing to the sources of social dependency, the field of social work in particular has come to recognize the contributions and influence of other sciences. We have also recognized the need for close integration and cooperation in seeking solu-

tions for our common problems. To be able to have professional groups come together and discuss the contribution which each can make toward the solution of a great national problem is the essence of democracy itself.

In these days when there is much discussion of the apparent evils of bureaucracy and too much centralized control, it is necessary to demonstrate that professional scientific leaders may come together voluntarily, of their own accord and in the manner of free discussion and democratic procedure find solutions for their common problems, and chart the course for future progress.

Such an opportunity is open to the professions of social work and medicine, to be able to bring the best thinking of the two groups to bear toward the common problems is a challenge which presents itself to us now, if we are to make a contribution to a more full and abundant life for the citizens of our commonwealth.

TUBERCULOSIS CONTROL

VALUE AND LIMITATIONS OF THE TUBERCULIN TEST*

Esmond R. Long, M.D.

The queries and doubts concerning the tuberculin test that have arisen within the last two years have had a healthy effect on our anti-tuberculosis campaign in forcing us to review our current procedures and test the validity of past beliefs. This paper omits all discussion of the tuberculin test except as a means for finding cases of tuberculosis.

In guinea pigs the test is practically infallible. The success of the campaign for eradication of bovine tuberculosis, based, as it is, on the tuberculin test, is a strong empiric argument for the practical value of the test. The almost constant finding of tuberculous lesions in cattle slaughtered because of a positive tuberculin reaction, and the failure to find tuberculosis in the routine inspection of millions of cattle not reacting and killed for meat production, is tangible evidence for its specificity and adequacy. In certain other animals, however, tuberculin allergy is far less conspicuous.

Tuberculin sensitivity in man can never be studied

with the same thoroughness as in guinea pigs or cattle. However, observations on children vaccinated with BCG have enabled us to study the results of artificial infection and its relation to tuberculin sensitivity and these studies indicate that after very mild infection an overwhelming majority of children become tuberculin-positive.

We are here not concerned with the total number of tuberculin reactors that may be detected, but rather with the detection of significant tuberculosis by the use of the tuberculin reaction as a preliminary screen. ("Significant tuberculosis" or "a case of tuberculosis" in its public health sense, is restricted to infection with the tubercle bacillus which has proceeded to the point where it has produced symptoms recognized as those of clinical tuberculosis, or has brought about changes demonstrated by x-ray examination that are considered to indicate tuberculous disease.) This definition places heavy responsibility on x-ray examination. If the tuberculin test is used at all in case-finding, it is as a screen to obviate the necessity of the more expensive x-ray examination. (In young adult groups, one-third or more of those tested with tuberculin may not react, and these need not be x-rayed.) It is believed by some that, on the basis of cost alone, saving x-ray examination of one-third of the subjects would not counterbalance the cost of the tuberculin test.

What does the standard first and second dose method of tuberculin testing (fully defined by the author) detect and overlook? Of 610 cases of pulmonary tuberculosis diagnosed in the Henry Phipps Institute during five consecutive years, all but one reacted to tuberculin. Among the 609 reactors, ninety-four per cent of the white, and ninety-six per cent of the colored reacted to the first (minimal) dose. (O.T. used in earlier, P.P.D. in later years.) However, in other similar clinics and in hospitals attention is drawn occasionally to cases of unquestioned tuberculosis, even with positive sputum, in which the reaction is negative. Explanations for these exceptions are easily found; the fact remains that cases of anergy in typical hospital patients are probably few.

However, clinic experience is not representative of the conditions of case-finding as they occur in mass surveys; some surveys deal with groups of high and others with low infection incidence. Evidence shows that the tuberculin test is an efficient preliminary case-finding measure in groups under relatively heavy exposure, as nurses in a hospital or sanatorium. For example, among 400 nurses, twenty-two "cases" of tuberculosis have occurred, all of which developed or already exhibited tuberculin sensitivity some months in advance of the onset of

*From Tuberculosis Abstracts, March 1940. The Tuberculin Test, Its Value and Its Limitations, Esmond R. Long, M.D., Amer. Rev. of Tuberc., Vol. XL, No. 6, Dec., 1939.

a recognized lesion, and no case has developed in the absence of tuberculin sensitivity. In groups under exceptional exposure the tuberculin test is an effective warning sign indicating the need of close and frequent observation.

Studies conducted by the United States Public Health Service and the Department of Health of Tennessee have shown that the tuberculin test is far from being the sharp indicator, once popularly supposed, of previous simple tuberculous infection. These studies disclosed a large amount of what appears to be healed primary tuberculosis in people not reacting to tuberculin. A supplementary survey conducted at Hagerstown, Maryland, however, indicated that for case-finding purposes the tuberculin test is highly effective. In the 1000 subjects examined by both tuberculin test and x-ray, thirteen cases of tuberculosis were discovered, all but one of which reacted to tuberculin, and this case was of scarred apical disease of slight extent and apparently long arrested. The author believes that an accuracy of about ninety to ninety-five per cent may be expected of the tuberculin test as a means of selecting subjects for examination by x-ray, but admits that a loss of five to ten per cent is serious, but perhaps inevitable.

LIMITATIONS OF THE TUBERCULIN TEST

The attempt to divide all mankind into two groups, infected and not infected, is futile and probably responsible for most of the present confusion. Two other groups must be recognized: (1) those infected, not yet positive, but to be positive shortly thereafter, and (2) those infected and previously positive, but now negative. (A possible fifth group would include those who are infected and never develop a positive reaction.)

Allergy does not develop simultaneously with infection. There may be an interval of from two to three weeks between infection and a positive tuberculin reaction. In any large survey there may be a few cases recently infected and not tuberculin-positive. In some of these, x-ray lesions may develop.

The second group (previously positive, now negative) is more important; probably the greatest single cause for our present confusion. We have tended to overlook the fact that with the arrest and healing of tuberculous lesions allergy wanes and finally may disappear.

In a period, however, when the mortality rate is dropping steadily, and the morbidity rate is following in some proportionate relationship, and when in addition an improved control of tuberculosis is bringing about a steadily increasing isolation of patients with open lesions, it is only to be expected that reinfection, the rule in the past, will become progressively less frequent. The infections that

formerly constantly restored a waning allergy will be far less frequent in the future and we may look forward to the time when loss of allergy will be as common as its maintenance.

A study of 2,490 positive reactors, all examined at the Henry Phipps Institute, showed that 276, or approximately eleven per cent became negative, either transiently or for the balance of the period of observation. It was disclosed also that the stronger the original reaction the less frequently it reverted to negative, and vice versa. Further, the correlation with exposure was equally striking. In fifty-eight per cent of the families in which no tuberculosis was present, the tuberculin reaction became negative in some member of the family, while in families where there was continuously a member with sputum-positive tuberculosis, allergy disappeared in some member of the household in only eight per cent of the families.

The fact that allergy tends to disappear where there is no exposure, and has more and more tendency to remain as exposure is presumably more frequent, suggests strongly that reinfection is responsible for the maintenance of the positive reaction. The epidemiological significance of this fact is obvious.

In the 276 cases in which the reaction became negative, no abnormality was detected in the film in ninety-four per cent and there were no cases of active reinfection type tuberculosis in the entire group. In ten cases with what were read as calcified lesions, the reaction became negative.

Two cases are recorded in which tuberculin-negative children with calcified lesions became tuberculin-positive coincidentally with the development of fresh, active tuberculosis.

NEWS NOTES

OSTEOPATHS

Milton V. Gafney, osteopath of Neodesha, filed an amended petition in the Kansas Supreme Court case of Gafney vs. The Wilson County Hospital on March 2nd.

The filing of the amended petition is in accordance with the order approved by the Kansas Supreme Court directing the plaintiff to make his petition more definite and certain. The former petition merely stated generally and intangibly that the plaintiff had been denied numerous privileges. In compliance with the above order of the court, the plaintiff has now placed his case upon two grounds—an alleged refusal to permit him to perform a surgical operation upon a case of intestinal obstruction and an alleged refusal to permit him to treat an obstetrical case surgically and medically.

What Famous Men Would Say About the 81st Annual Session**THE KANSAS MEDICAL SOCIETY**

- Confucius: He who does not brush up get dusty.
- Hippocrates: This I observe: he who observes the observations of others is therefore himself a better observer.
- Napoleon: What's to stop us? What are we waiting for?
- Shakespeare: Thrice blest is he who hies himself to Wichita May 13-16. For Opportunity hath provided from her ephemeral favors both pleasure and learning for him who would but heed her knock.
- Lincoln: It is not so much a duty as a privilege to add to one's ability by exposure to knowledge. Keeping abreast the times is but keeping your head above the water.
- Edison: We would still be in the dark if we had listened to our grandfathers.
- Winchell: Orchids to the Kansas Medical Society for providing p.g. for the M.D. in so palatable a pellet.

P.S. With due deference to the pseudo-sayings of the above immortals it is also our humble opinion you will not want to miss any feature of the 81st session at Wichita, May 13-16.

THE KANSAS MEDICAL SOCIETY**and****THE SEDGWICK COUNTY MEDICAL SOCIETY****(AS HOST)**

Excerpts from the new petition are as follows:

"During the course of his practice as an osteopathic physician, the plaintiff has had, and will continue to have, patients with ailments such as appendicitis, intestinal obstructions and other similar ailments which require entrance into the abdominal cavities with surgical instruments in order to effect a cure. Such patients are residents of Wilson County and have desired and will desire entrance to The Wilson County Hospital for the purpose of being treated by this plaintiff, but the defendants have denied and are now denying this plaintiff the right to enter such patients in The Wilson County Hospital and are denying to such patients the right to enter The Wilson County Hospital for the purpose of such surgical treatment by this plaintiff.

On the first day of December, 1938, the plaintiff received the following letter from the defendants:
205 Mill St. Telephone 61

WILSON COUNTY HOSPITAL
Neodesha, Kansas

Milton V. Gafney, D.O.
Neodesha, Kansas.

Dear Sir:

Pursuant to the judgment of the Kansas Supreme Court, State, ex rel. vs. Gleason, 148 Kan. 1, and opinion on Post-Decision Motion in same case filed October 18, 1938, the Board of Trustees of the Wilson County Hospital desires to call your attention to the last decision of our highest court which reads as follows:

"Therefore, it is by the Court considered, adjudged and decreed that the defendant, B. L. Gleason, be and he is hereby ousted from the practice of medicine and surgery; and it is further adjudged and decreed that under his license to practice osteopathy he is limited in the practice of the healing art to the practice of the science or system of osteopathy authorized by our statutes pertaining thereto, as such statutes have been defined and construed in the opinion of the court heretofore rendered in this cause."

We wish further to call your attention to a quotation from an opinion by Clarence V. Beck, Attorney General, for the state of Kansas, under date of October 21, 1938, which reads as follows:

"Thus if an osteopath has occasion to use the hospital (Wilson County Hospital), to practice within the scope of his profession he has that right. He has no right, however, to practice drug therapy, or perform surgical operations."

Referring again to the Post-Decision opinion, and adopting its language:

"Persons licensed only as osteopaths, if heretofore mistaken as to their authority with respect to the practice of medicine and surgery, and who because of such mistake had extended their practice into a field in which they were not authorized to engage, should and in all probability will, hereafter conform their practice to the science or system of osteopathy as distinct from the practice of medicine and surgery, in harmony with our statute as construed in our opinion in this case."

We trust in the future, in your use of the facilities of the Wilson County Hospital, you will refrain from exceeding the rights conferred upon you as a licensed osteopathic physician, as interpreted by the State Supreme Court and opinion of the Attorney General

and save both yourself and the board much possible embarrassment.

Respectfully,

Board of Trustees,
Wilson County Hospital.
(Signed) T. C. Babb,

President.

Attest:

(Signed) A. S. Hopkins,
Secretary.

The plaintiff not feeling definitely informed by the foregoing letter, consulted E. A. Warren and A. S. Hopkins, members of the Board of Trustees of the Wilson County Hospital as to the practice rights which he would be afforded by them in the Wilson County Hospital, and was informed that he would not be permitted to use surgical instruments of any character for any purpose while treating patients in the Wilson County Hospital. That because of the necessity of immediate treatment of such patients, the plaintiff has not made a practice of presenting such patients to the Wilson County Hospital for the reason that he was definitely told that he would be refused, but has taken such patients to other hospitals for such surgical treatment by him and has thereby been denied the use of the Wilson County Hospital. That plaintiff is not setting out the names of his patients or the specific ailments from which the individual is or was suffering because such matters constitute a matter of professional confidence.

That on the 25th day of August, 1939, plaintiff did have a patient residing in Wilson County, by the name of Mrs. A. B., who is well known to these defendants, and who was suffering from a chronic intestinal obstruction requiring immediate attention. He, accompanied by the patient's husband, called upon the acting superintendent of the hospital, Mrs. A. R. Tucker, the regular superintendent being on her vacation and out of the city, and informed the acting superintendent of the patient's condition and of his desire to place her in the Wilson County Hospital for treatment. The acting superintendent was informed that the treatment would require the administration of certain palliative drugs, anaesthetics and a surgical operation with instruments. The acting superintendent stated that it would be necessary for her to consult the members of the hospital board. She later informed this plaintiff that she had consulted with the various members of the board and was told to inform plaintiff that the case would not be admitted and that the board had previously passed a resolution to the effect that patients of plaintiff requiring such treatment should not be admitted to the hospital.

Plaintiff has had and will continue to have obstetric cases where the patients reside in Wilson County and who desire and whom plaintiff desires to enter in The Wilson County Hospital for treatment before, during and immediately after child-birth, but the defendants are denying to this plaintiff the right to use any laxatives or any antiseptics or disinfectant, anesthesia, sedatives or palliative drug of any character, and are denying to this plaintiff the right to use surgical instruments of any character for any purpose during or after child-birth including the care of lacerations while attending obstetric cases in The Wilson County Hospital.

That plaintiff is not, because of professional confidence, naming his patients who have been in confine-

TALK DOES MAKE THE CASH REGISTER RING!

An important part of the work of the Kansas Industrial Development Commission is to acquaint the people of Kansas with their industries and resources—so they may SELL them.

Many a Kansas business man can tell you that the growing interest in the state's industry has already rung his cash register. Here is an example—

The head of a Kansas manufacturing concern writes, in respect to Commission initiated publicity:

"I was more than pleased and will say that it not only gave us publicity but also we got direct inquiries and actually made some nice sales. The last order we are not able to fill but

it gives us something to work on in time to come. You can rest assured you have our cooperation 100 per cent."

Words such as these are even dearer to the hearts of the proponents of industrial development than new industries, because existing Kansas industries are the first that should be assisted and publicized in this state's development program.

What helps Kansas business helps all Kansans. Talking about and selling existing Kansas business is proving its worth. For better business and a more prosperous Kansas, let's continue to learn about—and talk convincingly about—Kansas industries.

KANSAS INDUSTRIAL DEVELOPMENT COMMISSION



ment, or who are now in a condition of pregnancy, and will later require hospitalization, but states that on or about the 5th day of December, 1938, the plaintiff had a patient by the name of Mrs. X, well known to these defendants, and covered by their hospital records, who was a resident of Wilson County. The patient was taken to the Wilson County Hospital for confinement. She was at the time suffering from high blood pressure and plaintiff deemed it advisable to administer 50 c.c. of 50 per cent glucose intravenously. He requested the nurse on the case to prepare the glucose, but was informed by Coena Foster, the superintendent of the hospital that glucose constituted medicine and plaintiff would therefore not be permitted to use it. Plaintiff then talked with the superintendent in charge of the hospital, and was informed by her that he would not be permitted to use drugs of any character, anaesthetic or instruments because of an order of the board of hospital trustees. The labor progressed very rapidly and plaintiff did not have an opportunity to call a doctor of the defendants' choosing, and he was required to deliver the child without the use of any chloroform, ether, analgesic or anaesthetic of any kind. A minor laceration resulted, due to the above mentioned facts, and plaintiff was not permitted to use the necessary instruments to repair the laceration. During her care after child birth, plaintiff was denied the right to give the patient laxative of any character or use any drug of any character for any purpose. Since that experience, plaintiff has not attempted to take any obstetric cases to the Wilson County Hospital, and because of the refusal of these defendants to permit proper treatment of obstetric cases by the plaintiff, he is being denied the use of the Wilson County Hospital for obstetric cases."

The Wilson County Hospital will have an option of answering the petition or of filing additional motions in regard to its contents and wording.

The Kansas State Board of Medical Registration and Examination filed an *amicus curiae* brief in the case of the Kansas State Osteopathic Association vs. William H. Burke, Collector of Internal Revenue, on February 10th, which case is now pending in the United States District Court of Appeals. Excerpts from that brief are as follows:

"The Kansas State Board of Medical Registration and Examination has sought and obtained leave to file this brief *amicus curiae*. The Kansas State Board of Medical Registration and Examination is specially charged with the duty of seeing that the laws relating to the practice of medicine and surgery are enforced in the State of Kansas. (G. S. 65-1006.) The Board is cognizant of the fact that certain osteopaths in Kansas are openly performing surgical operations, utilizing narcotics and practically all other drugs in their practice, and otherwise violating the laws of Kansas. This statement will not be denied. This fact causes the concern of this Board in this appeal.

The obtaining of narcotics in lawful channels by virtue of a narcotic permit will add greatly to the burden of the Board, in seeing that the laws relating to the practice of medicine and surgery are enforced in the State of Kansas.

The Board further believes that under the laws of the State of Kansas narcotics can not lawfully be used by any licensed osteopath and that the action of the collector in refusing to register and issue the licenses to obtain narcotics was in accordance with the laws of the State of Kansas.

The Laws of the State Determine Who Is Lawfully Empowered to Distribute, Dispense, Give Away, or Administer Narcotics: No authorities need be cited to establish this contention. Those statutes and authorities set out on pages 10, 11, 15 and 16 of the appellant's brief fully cover this point. Indeed both parties to this action agree this is the law.

The Supreme Court of the State of Kansas Has Held That Under the Kansas Statutes Osteopaths May Not Use Drugs, Including Narcotics: The truth of the above statement is disclosed beyond challenge by a critical analysis of the several cases decided by the Supreme Court of the State of Kansas which deal with the rights of osteopaths to practice their profession as granted by the statutes of the State of Kansas. The last of the decisions to that effect is the case of State, ex rel., v. Gleason, *Supra*, cited and discussed by both the appellant and the appellee herein.

In order that this court may be better enabled to weigh the effect of that opinion the Board desires to trace, in a general way, the statutory and judicial treatment of the subject of osteopathy in Kansas.

Prior to the year 1901 the practice of osteopathy was unrecognized by the legislature of the State of Kansas, although statutes relating to physicians and the practice of medicine were enacted as early as 1861. The entire field of healing was "medicine and surgery" and licenses were granted only for that practice.

In 1901 the legislature of the State of Kansas first recognized osteopaths and strictly limited their practice to a form of healing carried on by manipulation and without the use of drugs and operative surgery. Provision was made for licensing osteopaths through the medical board. The privileges granted to osteopaths by the act of 1901 have never been extended or enlarged by any subsequent act of the legislature. (*State v. Gleason, Supra.*)

In the year 1913 the legislature removed the requirement that osteopaths should obtain their licenses from the medical board and created a separate board for licensing osteopaths but this act of 1913 did not enlarge the limited scope of practice conferred upon them by the 1901 statute. (*State v. Gleason, Supra.*)

The earliest decision of the Kansas Supreme Court dealing with osteopathy occurred in 1911. This case involved an individual engaged in a branch of the healing art which he claimed was neither "medicine or surgery" or "osteopathy," but was chiropractic, a branch of healing then unlicensed in Kansas. The Supreme Court found it necessary to define "osteopathy" and "medicine and surgery in Kansas and that definition of osteopathy was given as follows:

"Osteopathy is carved out as a separate department, and registration and license are required, while its practitioners are prohibited from giving medicine and performing surgical operations—that is, from practicing medicine and surgery as distinguished from osteopathy. But medicine and surgery, which the appellee is charged with attempting to practice, by common use and adjudged meaning cover a wide portion of the domain of healing, and may and should be held to cover the case of one who, not claiming to be a physician or surgeon, really practices osteopathy under another guise without possessing the qualifications required of the osteopath. Osteopathy is defined as "a system of treatment based on the theory that diseases are chiefly due to deranged mechanism of the bones, nerves, blood vessels, and other tissues, and can

TO HELP THE EPILEPTIC LEAD

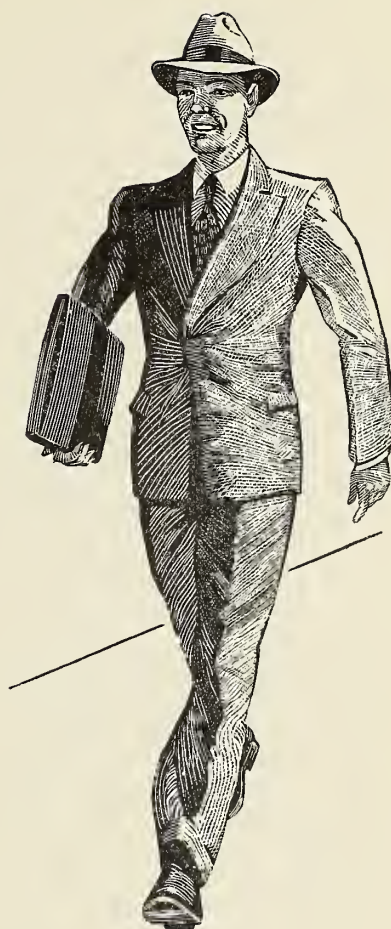
A NORMAL LIFE

—KAPSEALS DILANTIN SODIUM

THE epileptic patient is handicapped. But his seizures can often be controlled—without the dulling and depressing effects of excessive sedation.

Dilantin Sodium (sodium 5,5-diaphenylhydantoinate) is an anticonvulsant with little or no hypnotic effect. In children, its use does not interfere with normal play, study, and development. And with this type of treatment the epileptic adult is aided in maintaining social and economic adjustment.

Clinical experience demonstrates that Dilantin Sodium therapy prevents, or greatly decreases the frequency and severity of, convulsive seizures in a majority of epileptics. And many physicians report



that such control is very helpful in the management of these patients.

Use of this product is suggested in the treatment of patients with epilepsy who have not responded satisfactorily to other medication.

Kapseals Dilantin Sodium, 0.1-gram ($1\frac{1}{2}$ -grains) and 0.03-gram ($\frac{1}{2}$ -grain), are supplied in bottles of 100, 500, and 1000.

PARKE, DAVIS & COMPANY
DETROIT, MICHIGAN

be remedied by manipulations of these parts." (Webster's New Inter. Dict.) It has been judicially defined as "a method of treating diseases of the human body without the use of drugs, by means of manipulations applied to various nerve centers—chiefly those along the spine—with a view to inducing free circulation of the blood and lymph, and an equal distribution of the nerve forces. Special attention is given to the readjustment of any bones, muscles or ligaments not in the normal position." (6 Words & Ph. Jud. Def. p. 5070.) Medicine is defined as "the science and art dealing with the prevention, cure, or alleviation of disease; in a narrower sense, that part of the science and art of restoring and preserving health which is the province of the physician as distinguished from the surgeon and obstetrician." (Webster's New Inter. Dict.) The same authority defines surgery as the "art or practice of healing by manual operation; that branch of medical science which treats of mechanical or operative measures for healing diseases, deformities, or injuries."

State v. Johnson (1911)
84 Kan. 411, 1c. 416
57 Pac. 965

"The legislature has, by the statutes referred to, treated osteopathy as a separate department, and covered all the other branches of the healing art by the term medicine and surgery. As new schools of practice come into favor their followers must possess the requirements for the practice of medicine or surgery, or prevail upon the legislature to make separate provisions for them as it has done for the osteopaths."

State v. Johnson, Supra.
1c. 420

Again in the year 1925 we again find the Supreme Court of the State of Kansas defining osteopathy by the same terms as were used in the case in 1911.

"We must look to the law books for the definition of the term. 3 Words and Phrases, 2d series, 803, defines osteopathy as "a method of treating diseases of the human body without the use of drugs, by means of manipulation applied to various nerve centers, chiefly those along the spine, with a view of inducing free circulation of the blood and lymph, and an equal distribution to the nerve forces. Special attention is given to the readjustment of any bones muscles or ligaments not in the normal position. It is that method of the healing art accomplished by a system of rubbing or kneading the body."

State, ex. rel., v. Eustace
117 Kan. 746, 1. c. 747
233 Pac. 109.

"Osteopathy when practiced by a physician or surgeon, as is defined in section 65-1005, may be and probably is a part of the art or science of healing, but the practice of osteopathy, while it may be a part of the art of healing, is not comprehended within the term "practicing medicine," nor within the term "surgical operation," as used in section 65-1005 of the Revised Statutes. Section 65-1508 of the Revised Statutes, providing that nothing in the optometry act shall be construed as preventing regular registered physicians and surgeons from practicing optometry, does not include those who are registered to practice osteopathy."

State, ex rel., v. Eustace, Supra.
1. c. 748

Thus, the Supreme Court of the State of Kansas rec-

ognized that the legislature, by its act of 1913, did not enlarge the limited practice rights it had granted to osteopaths in 1901.

Again in 1938 (June 11th) we find the Supreme Court of the State of Kansas adhering to its previous definitions and declaring osteopathy to be a branch of the healing art not authorized to use drugs including narcotics or to perform operative surgery in the State of Kansas.

"They argue that the intentional removal of this restriction on osteopaths contained in the 1901 statute indicates a legislative intent to authorize osteopaths to administer drugs and perform operations in surgery without restriction. It seems clear the legislature intentionally omitted the prohibitory phrase contained in the 1901 act from the act of 1913 (ch. 290), but it does not follow that thereby the legislature intended to confer unrestricted authority on osteopaths to administer drugs and perform operations in surgery. Considering the fact that surgery in its primitive and broadest sense includes adjustment of bones, muscles, ligaments and nerves by manual operation, and that skill in doing so is taught in osteopathic schools and colleges, and occupies a major place in the science or system of osteopathy, and in the practice of osteopathy, the prohibition against osteopaths performing operations in surgery contained in the 1901 act was, at its best, an inaccurately used expression, and should have been omitted for that reason alone. The science or system of osteopathy, generally speaking, strongly opposed the use of drugs as remedial agencies in treating the sick, afflicted, or injured, and osteopathic schools and colleges of good repute contained no course for the study of materia medica; hence, there was no real claim or pretense of doing so, nor did they study to qualify themselves for such use. Broadly speaking, theirs was a drugless system of healing. Surgery, as well as obstetrics (Yard v. Gibbons, 95 Kan. 802, 149 Pac. 422), and each of the other subjects in which osteopaths were required to take an examination, were taught in the osteopathic schools and colleges of good repute, in harmony with the osteopathic theory or system of healing, and not as taught in the medical colleges and universities. So the word 'surgery', as used in this statute, meant, in the main, surgery by manual manipulation. The general use of a knife or other instruments in surgical operations was regarded as unnecessary and opposed to the osteopathic system of treatment. Apparently the legislative intent of the act of 1913 (ch. 290) was to recognize the system of osteopathy as then taught in its schools and colleges of good repute, and to authorize its practice by those who believed in and conformed to its teachings. Our legislature recognized that there is a broad field for the use of such a system of healing art. If, as is suggested by council for defendant, osteopathic schools and colleges of good repute, and those who practice osteopathy, have abandoned their fundamental theory that surgery, in the main, should be confined to manipulation without the use of the knife and other instruments, that fact never has been recognized by the legislature or the courts of this state."

State, ex rel., v. Gleason
148 Kan. 1, 1c. 11

"Are osteopathic physicians in Kansas licensed (a) to administer drugs and narcotics and practice drug therapy, and are they licensed (b) to perform sur-

"The various disturbances which have been associated with cigarette smoking are as follows: Excess salivation; hoarseness; irritation and 'biting' of the tongue; cough; shortness of breath; burning; palpitation of the heart.

"All these disturbances with the exception of palpitation of the heart are associated with an irritation of the mucous membrane."

cig
nes
nes
of
mer

*Laryngoscope, Feb. 1935,
Vol. XLV, No. 2, 149-154*

BUT WHAT HAPPENED WHEN SMOKERS CHANGED TO PHILIP MORRIS?

Again in the same paper it is reported that...

After smoking the cigarette* for from three to four weeks the congestion had disappeared in 62.3 per cent and the throat looked normal. The other 37.7 per cent showed considerable improvement. The cough disappeared in 75.6 per cent while in 26.4 per cent no change could be detected. The tongue conditions cleared up completely in each case.

*Reprints available on request.***

*PHILIP MORRIS

**ADDRESS PHILIP MORRIS & CO., LTD., INC., 119 FIFTH AVENUE, NEW YORK

gery under the provisions of the osteopathic practice act? Generally speaking, the answer to the first part of this question (a) must be in the negative, insofar as such drugs are given as remedial aids. To the second part of the question (b) the answer must be 'yes,' if confined to surgery as the same was taught and used as a part of the osteopathic system of healing—which, in the main, was by manipulation—and the answer should be 'no,' if it extends beyond this into the general field of operative surgery with surgical instruments. In this connection the briefs put to us specific questions, such as: May one licensed to practice osteopathy, under stated circumstances, administer a simple drug, or a specific drug, for remedial purposes, or use surgical instruments? We are not called upon to answer detailed questions of that character, nor would we deem it proper for us to do so. We are called upon to interpret our statutes. We have no difficulty in finding that our legislature recognized the practice of medicine and surgery as one thing, and the practice of osteopathy as another, and that it regarded both schools of healing as having merit, and the practice of each was authorized.

State, ex rel., vs. Gleason
148 Kan. 1, lc. 13

It will be seen from the above that the Supreme Court in 1911, again in 1925 and again in 1938 definitely and positively stated that the osteopaths were privileged to practice a branch of the healing art which did not include drugs (and narcotics) or the performance of surgical operations.

From the above it will be seen that on the one hand the defendant osteopath in the Gleason case was specifically claiming the right to use drugs including narcotics. On the other hand the State contended that the osteopaths had no right to use drugs, including narcotics. In the deciding that sharply controverted issue of law the Supreme Court used the language above quoted from the Gleason opinion.

The appellee based its entire case in the lower and its argument in this court on the theory that the Supreme Court of Kansas in the Gleason case above cited, did not contain a definite prohibition against the use of drugs by osteopaths because the Supreme Court used the phrase "generally speaking, the answer to the first part of this question (a) must be in the negative in so far as such drugs are given as remedial aids." The appellee would have this court disregard entirely the general effect of the case of State, ex rel., v. Eustace above cited and the effect of the balance of the opinion in the Gleason case, *supra*.

The appellee desires to eliminate from the opinion the numerous references made by the Supreme Court to the effect "osteopaths do not believe in drugs," "theirs was a drugless science," "if . . . osteopathy has abandoned its fundamental opposition to drug therapy and operative surgery . . . and now includes the use of those things in its system, that fact has never been recognized by the legislature of this State," "there was no real occasion to prohibit osteopaths from using drugs since they made or claimed no pretense of doing so or did they study to qualify themselves for such use."

The appellee urges that by the use of the phrase "in so far as such drugs are given as remedial aids" opens wide the gate and permits a use of drugs and particularly narcotics by osteopaths. To sustain that argument it would first be necessary to establish the

premises that the Supreme Court of the State of Kansas did not know and understand the meaning of the phrase "remedial aids."

The appellant herein has called the attention of this court to the case of United States v. Natura (D. C., N. D. Cal., May 9, 1917) 250 Fed. 925. Therein remedy is defined as being that which relieves or cures a disease. The appellant has also called attention to the fact that the writers of dictionaries, both general and medical, have without exception given this word the same definition. Under these circumstances it would seem difficult to establish that the Supreme Court of Kansas was not aware of the meaning of the phrase used.

It is the Boards contention that the Supreme Court choose that definition with full knowledge of its meaning, and stated that osteopaths may not use any drug to prevent, palliate or cure diseases, or to cure or relieve. The entire record in this case discloses that narcotics are used and useable only as a remedy. They have no other purpose except to palliate the patient, relieve or cure the pain. There is no basis for the appellee's contention that the Supreme Court of the State of Kansas used the word "remedial" as a substitute for "curative."

Appellee lays much emphasis on the use of the phrase "generally speaking." Here again the appellee would have this court lose sight of the entire opinion and the intent of the opinion as disclosed by a full reading of the opinion. Apparently the Supreme Court did have some specific thought in mind by qualifying the negative answer to that part of question VIII which related to drugs. If any conclusion can be drawn from the opinion of the court as to what brought about the use of that qualified negative answer it can probably be found in the phrase "our legislature dealt with the two schools of healing in terms quite general and that is the viewpoint we take."

Perhaps the court had in mind minor practices involving a use of drugs which by common usage and understanding could not be called "medical" treatment. Most certainly it can not be contended that the use of narcotics is the use of minor, household, simple, domestic, or harmless drugs. Certainly the appellee can not contend that narcotics are not used solely and only as a remedy, and since their use is strictly limited to a use as a remedy they definitely come under the prohibition of the laws of the State of Kansas, and the negative answer given by the court to the osteopaths question propounded.

Indeed, if the entire opinion except the portion above quoted be disregarded there is still sufficient to be found in that quoted portion to refute the appellee's contention.

It will be noted that this question VIII. (a) deals with three matters, i.e., drugs, narcotics and drug therapy. It can be urged that the Supreme Court stated that, generally speaking to all three sub-divisions, the answer is negative; that is, osteopaths may not use drugs, may not use narcotics, and may not use drug therapy. But the negative answer given to the usage of drugs is qualified to apply only when they are used as remedial aids. Thus the negative answer is unqualified as to narcotics and as to drug therapy.

It is the boards contention that the Supreme Court of the State of Kansas specifically answered in the negative the osteopaths claim of their right to use drugs, including narcotics. It is the boards further

**For Patients
who need sleep
IPRAL
provides these
advantages . . .**



- . . . It produces sleep closely resembling the normal from which the patient awakens generally calm and refreshed.
- . . . Its average therapeutic dose is small.
- . . . It acts promptly after administration and its action continues over a period of hours.
- . . . It is readily absorbed and rapidly eliminated.
- . . . It is free from cumulative effect when dosage is properly regulated.
- . . . Its effect on heart, circulation and blood pressure is negligible.

HOW SUPPLIED

IPRAL CALCIUM (calcium ethylisopropylbarbiturate) is supplied in 2-gr. tablets as well as in powder form for use as a sedative and hypnotic; and in $\frac{3}{4}$ -gr. tablets for use when it is desired to secure throughout the day a continued, mild, sedative effect.

IPRAL SODIUM (sodium ethylisopropylbarbiturate) is supplied in 4-gr. tablets for preanesthetic medication.

For literature address Professional Service Department, 745 Fifth Ave., New York

E. R. SQUIBB & SONS, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

contention that the Supreme Court specifically answered in the negative the osteopaths claim of their right to use narcotics. It is the boards further contention that the Supreme Court answered in the negative the right of osteopaths to use drugs for the relief and palliation or cure of a patient.

It is recognized that the word physician may sometimes be used in a broad sense to include all those persons who attempt to treat or heal the ill. To construe the word as having that meaning in this statute in order to permit osteopaths to possess narcotics lawfully would also mean that chiropractors, podiatrists, midwives and possibly others could likewise lawfully possess and use narcotics. Certainly each of those are engaged in treating the ill and would come under a general meaning of the world physician. Amicus curiae, however, contends that the term physician as used in this act meant only physicians licensed by this board and made no reference to or included osteopathic physicians, chiropractic practitioners or any other persons who may be engaged in practicing any branch of healing art in the State of Kansas.

It is also worth noting that while in this case the appellee claims one of the most urgent reasons for using narcotics is the proper care and treatment of obstetrical patients; Midwives have the privilege of practicing obstetrics in Kansas, yet they have not had, nor are they entitled to a narcotic permit unless the word physician in the statute is given a construction as that contended by appellee.

On page 15 of appellee's brief it is stated:

"The allopathic theory, generally speaking, being that drugs are to be used as a curative treatment for all bodily diseases and ailments; the theory of the osteopathic profession being that, generally speaking, bodily diseases and ailments could not be cured by drugs, but that drugs are useful as a symptomatic relief, while manipulative and other osteopathic treatments must provide the curative agency."

Appellee's Brief, Page 15

It is needless to point out the inaccuracy contained in this statement concerning the theory of medical practice, that physicians and surgeons treat only with specific cures. A better answer would be that chiropractors, under the laws of the State of Kansas, are licensed to practice in their limited field of healing art. Undoubtedly the pain of the patient with which the chiropractors are or may be confronted is no different in degree or kind from that met by the osteopaths. Their treatment of that pain is symptomatic in the same way that the treatment by an osteopath is symptomatic.

The legislature has undoubtedly felt that they deemed themselves qualified to relieve pain under their theory of chiropractic therapy without the use of narcotics. Chiropractors have no right to obtain or use narcotics under the laws of the State of Kansas. When the osteopaths were licensed to practice their profession, their therapy was designed to relieve pain and other illnesses by means of manipulation alone. On the strength of that claim the legislature granted them the privilege of practicing their profession of osteopathy in the State of Kansas. If they have found, as they now claim, that their osteopathic therapy will not relieve pain, but they must use narcotics or other drugs to secure that end, that need should be pressed upon the legislature rather than upon the courts."

The amicus curiae brief was prepared by Mr. Theo F. Varner of Independence, attorney for the Kansas State Board of Registration and Examination.

The United States Circuit Court of Appeals has not as yet handed down an opinion in the case. Since that court does not have a set time for the rendering of opinions, it is not known when this will be received.

Gleason and Leopold, osteopaths of Larned and Garden City respectively, were recently named defendants in a malpractice suit which was filed following the death of a boy who was allegedly operated by Gleason for appendicitis. The case is unusual in as much as Gleason is under order from the Kansas Supreme Court not to practice operative surgery. Leopold has also been named the defendant in another case charging him with illegally performing operative surgery.

Several injunction cases pertaining to the illegal practice of medicine and surgery by osteopaths are pending in various district courts of the state.

APPOINTMENTS

Dr. C. C. Nesselrode recently announced the following new appointments to the Society Committee on Child Welfare: Dr. B. I. Krehbiel, of Topeka, Chairman; Dr. Paul C. Carson, of Wichita; Dr. Paul E. Belknap, of Topeka; Dr. Earl G. Padfield, of Salina; Dr. J. A. Wheeler, of Newton; Dr. R. F. Boyd, of Topeka; Dr. D. M. Medearis, of Kansas City.

The committee will handle all functions of the Society pertaining to pediatrics and child welfare. The name of the Committee on Maternal and Child Welfare has been changed to the Committee on Maternal Welfare and it will henceforth deal mainly with activities pertaining to obstetrics and maternal welfare. The membership of the Committee of Maternal and Child Welfare remains the same as the former Committee of Maternal and Child Welfare with the exception of Dr. B. I. Krehbiel, of Topeka, who has been transferred to the new committee.

CANCER PROGRAM

Arrangements have been completed wherein the Kansas State Board of Health, through funds provided by the United States Public Health Service, will cooperate with the Society Committee on the Control of Cancer in presenting a postgraduate course for physicians on cancer.

The plans for the course are as follows:

That Dr. Maurice V. Lang of the Barnard Skin and Cancer Hospital, of St. Louis, Missouri, will be the speaker.

That the course will be presented on six consecutive days in six well distributed areas of the state.

That the meetings at each meeting place will be held from 4:00 to 6:00 p.m. and 7:30 to 9:30 p.m. each day.

That the subjects to be covered will consist of the cancer problem generally, skin cancer, cancer of the buccal cavity, and melanomas.

That no lay meetings will be held.

The meetings of the course will be held at the following places:

Monday, March 25—Pittsburg
Tuesday, March 26—Sterling
Wednesday, March 27—Dodge City
Thursday, March 28—Hays
Friday, March 29—Clay Center
Sunday, March 31—Horton

Behind

MERCUROCHROME

(dibrom-oxymercuri-fluorescein-sodium)



is a background of

Precise manufacturing methods insuring uniformity

Controlled laboratory investigation

Chemical and biological control of each lot produced

Extensive clinical application

Thirteen years' acceptance by the Council of Pharmacy and Chemistry of the American Medical Association



A booklet summarizing the important reports on Mercurochrome and describing its various uses will be sent to physicians on request.

Hynson, Westcott & Dunning, Inc.

BALTIMORE, MARYLAND

ENLIST

enlist

in the Women's Field Army of the American Society for the Control of Cancer, and help in the intensive war against this disease.

educate

yourself and others to recognize early symptoms that may indicate cancer.

save

some of the 150,000 who may die this year unless promptly treated. Early cancer can be cured.

*join your
local unit
now!*

or send your
enlistment fee
of \$1.00 to

**AMERICAN SOCIETY
for the
CONTROL of CANCER**

350 Madison Ave., N. Y.



Drink
Coca-Cola
Delicious and Refreshing

**THE
DRINK
EVERYBODY
KNOWS**

INCUBATORS

The Kansas State Board of Health recently announced that it has placed forty-three incubators in various Kansas counties during the last year. The incubators are placed in central locations with instruction that they may be used by all licensed physicians.

The Board will attempt to assist other counties in obtaining incubators if their present incubator facilities are inadequate.

The above program is being operated in conjunction with the Society Committee on Maternal Welfare which hopes to be able to report that every Kansas county has at least one incubator by the end of 1940.

COLLEGE OF PHYSICIANS

The American College of Physicians recently announced the election of the following new members in Kansas. Fellowships: Dr. J. G. Stewart of Topeka; Dr. N. P. Sherwood of Lawrence; Dr. A. J. Revell of Pittsburg. Associateships: Dr. L. G. Allen of Kansas City; and Dr. F. C. Taggart of Topeka.

A. M. A. MEETING

The 1940 annual meeting of the American Medical Association will be held June 10-14 in New York, with official headquarters at the Waldorf-Astoria Hotel. Indications all point to a record breaking attendance this year, with the World's Fair as an added attraction, and publicity has gone forth warning all who plan to attend to make hotel reservations long in advance. Dr. Peter Irving is chairman of the hotel reservations committee and a communication addressed to him at room 1036, 233 Broadway, New York City, will receive immediate attention.

KANSAS HEART ASSOCIATION

The following announcement was recently made by Dr. Philip W. Morgan of Emporia, chairman of the Society committee on Study of Heart Disease and chairman-secretary of the Kansas Heart Association.

"The Kansas Heart Association of the Kansas Medical Society will hold a meeting at the Allis Hotel from 4 to 6 p.m. on Monday afternoon of the state meeting. All men not already members of the Association, but interested, should communicate with Philip W. Morgan, M.D., Gazette Building, Emporia, Chairman and Secretary of the Association. The meeting will be an informal seminar for open discussion by those present who have cases they wish to discuss. So that duplicate material can be discussed at the same time Doctor Morgan has asked that men send him before hand a short note suggesting the nature of the problem that each man will present.

Doctor Harold Jones of Winfield who has been interested in ventricular muscle bundle localization of infarcts has agreed to review his impressions of this interesting work. Anyone else who has recently done original work or original confirmation of other such significant work would be welcome by the group, but as much as possible the meeting is being planned as an informal open discussion. If the men present feel additional time is needed to complete discussions under way, arrangements have been made for the group to continue the meeting after dinner. Much interest has been manifested by the men

especially interested in cardiology over the state and especially those who own or operate electrocardiographs have realized the desirability of an open forum group where their mutual problems might be discussed."

SULFANILAMIDE

The Editorial Board recently received the following communication from Dr. L. D. Johnson of Chanute:

"I wish to make a peculiar little report on the use of sulfanilamide in powder form in the treatment of impetigo. I have used it in a number of cases by applying the powder directly and believe it has a wonderful curative affect. The results have been marvelous. The top of the blister must be removed so that the powder can be applied directly to the raw surface."

MINUTES

A meeting of the Committee on the Conservation of Eyesight was held in Wichita on February 4, 1940.

Members of the committee present were Dr. Lyle S. Powell, Lawrence, Chairman; Dr. H. L. Kirkpatrick, Topeka; Dr. Wm. M. Scales, Hutchinson; Dr. George Gsell, Wichita, Dr. J. F. Gsell of Wichita, and Clarence Munns were also present.

Dr. Scales presented a report concerning a questionnaire he forwarded to all Kansas eye, ear, nose and throat specialists in regard to whether they would favor the presentation by the committee of a postgraduate course for eye, ear, nose and throat practitioners. Dr. Scales reported that he had received thirty-eight replies in favor of a course of this kind and only four opposed; that the majority felt the course should be presented at a central place in the state; that it should be three or four days in duration; that half of the course should be devoted to eye and half to ear, nose and throat; and that thirty-eight of the forty-one favored a self-financed course with a fifteen or twenty dollar registrations fee. Upon a motion made by Dr. Gsell, and carried, it was decided that Dr. Scales should continue his investigation on this subject, and that the committee would plan to offer a course of this kind next winter.

Dr. Janney, who was unable to attend, had forwarded a report of his investigation of the possibility of holding a committee sponsored eye, ear, nose and throat postgraduate course for general and other practitioners. Following discussion of Dr. Janney's report it was decided upon a motion made by Dr. Gsell, and carried, that a suggestion should be made to Dr. Janney that he forward a bulletin in the name of the committee to the county medical societies offering the services of speakers on eye, ear, nose and throat subjects, and that this plan be utilized as an experiment to determine the interest, in courses of this kind, of the profession.

The subject of sight saving classes was discussed and Dr. Gsell was asked to continue his joint efforts with Mr. LeRoy Hughbanks in this connection.

Dr. Kirkpatrick reported that he and Mr. Hughbanks are at present considering ways and means to improve the medical forms being used by the Division of the Blind of the Kansas State Board of Social Welfare, and that he felt it would be possible to improve these in certain respects.

A letter from Mr. Hughbanks was presented, asking the advice of the committee on a suggested bulletin, describing the examination and treatment procedures under the Kansas blind program, which the Kansas State Board of Social Welfare plans to issue in the near future. Several sugges-

A New Viewpoint

A New Edition

DISEASES of the SKIN

by R. L. SUTTON, M.D., Sc.D., LL.D., F.R.S. (EDIN), Professor of Dermatology, University of Kansas, School of Medicine, and R. L. SUTTON, Jr., A.M., M.D., L.R.C.P. (EDIN). Assistant Professor in Dermatology, University of Kansas, School of Medicine.

**Is the Skin
the PERISCOPE to
INTERNAL DISORDERS?
Sutton and Sutton Say YES
in DISEASES of the SKIN**

New 10th Edition. 1549
Pages. 1452 Illustrations.
21 Color Plates.
PRICE \$15.00

In fact the new Tenth Edition of "Diseases of the Skin" emphasizes this new viewpoint — ARE SKIN LESIONS DISEASES PER SE OR SIMPLY SKIN MANIFESTATIONS OF INTERNAL DISORDERS? This viewpoint opens a new vista in medicine! As a result, the material in the new edition has been arranged in a fashion radically different from the arrangement of the Ninth Edition. Illustrations and text matter have been increased, and descriptions of all significant entities, syndromes, and concepts, and of many exotic, unusual, and even exceptional dermatoses have been incorporated.

What Reviewers Say

"This excellent book might easily be referred to as 'An Atlas of Skin Diseases' because of its numerous illustrations. The subject of dermatology is presented in a clear and comprehensive manner, making the book a very valuable addition to the library not only of the dermatologist but of the general practitioner as well." —PENNSYLVANIA MEDICAL JOURNAL.

"To attempt to describe the volume other than to say that it is encyclopedic of skin diseases is useless. Every practitioner should have access to it." —SOUTHWESTERN MEDICINE.

"The excellence of this work is revealed by a careful examination of its contents. Although many of the descriptions of conditions in the text are brief, the information is ample to give a good idea of the basic points necessary to identify the entity and there is a profuse number of excellent reproductions of photographs to aid in the visualization of the disease." —JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

TABLE OF CONTENTS

1. Anatomy
2. Embryology
3. Physiology
4. General Etiology
5. General Symptomatology and Pathology
6. General Diagnosis
7. Treatment
8. Classification
9. Class I—Inflammations
10. Class II—Purpuras
11. Class III—Metabolic Dermatoses
12. Class IV—Atrophies
13. Class V—Neuroses
14. Class VI—Anomalies of Pigmentation
15. Class VII—Malformations
16. Class VIII—New Growths
17. Class IX—Diseases Due to Viruses
18. Class X—Diseases Due to Bacteria
19. Class XI—Diseases Due to Higher Fungi
20. Class XII—Diseases Due to Animals
21. Class XIII—Diseases of the Appendages
22. Class XIV—Diseases of the Mucous Membranes.

THE C. V. MOSBY COMPANY

KMJ 3-40

3525 Pine Blvd., St. Louis, Mo.

Gentlemen: Send me Sutton and Sutton "DISEASES OF THE SKIN" priced at \$15.00.

Dr.

Address

USE THE COUPON TO ORDER NOW

tions were approved by the committee and the central office was instructed to communicate these to Mr. Hughbanks.

The question of approval of ophthalmologists for participation in the Kansas blind program was discussed, and the committee expressed itself as being in favor of the present plan now being used in that regard.

Adjournment followed.

A meeting of the Committee on Public Policy was held in Wichita on March 10th.

PNEUMONIA CONTROL

Pneumonia control depots have been established in twenty-three counties under the Kansas State Board of Health pneumonia control program. Sulfapyridine and pneumonia serum laboratory facilities are available to medically indigent pneumonia patients, without charge through these depots, upon recommendation and judgment of their attending physicians.

Any counties wishing to establish a depot for this purpose may do so by filing a request with the Kansas State Board of Health. However, certain practical considerations make it advisable where possible to consolidate several counties under one depot. Physicians utilizing supplies and services available under this program are requested to make certain that the case report forms furnished by the Kansas State Board of Health are completed in every case. Through these forms much important information can be assembled on the relative efficacy of serum and sulfapyridine in the treatment of pneumonia.

F. S. A. MEDICAL AID

The Farm Security Administration recently published the following news release:

Voluntary group health plans operating in ten Kansas counties with the cooperation of the Farm Security Administration during the last six months of 1939 gave medical service to 9368 persons and expended a total of \$20,853.53 with hospitals, physicians, dentists and druggists, it was announced today by Mr. George L. McCarty, state FSA director.

A survey of the health plan activity in Kansas reveals that 1908 families held membership in the county groups. Loans of \$30 each from FSA enable them to join their local groups and obtain adequate medical service. At the same time this assured physicians and allied professions adequate remuneration.

McCarty said the medical program is expanding in the state and new loans and organization of additional units indicated that 2327 families would be participating by January 31, 1940. The FSA participation in the program is supervised by Mr. B. E. Winchester, state FSA cooperative specialist. The plan has been presented to forty-two counties in Kansas in Region VII, twelve of which are now in operation; in fourteen counties it has been accepted by both doctors and farmers and will soon be in operation. Part of the remaining fifteen counties have advised the state office that they are favorably considering the plan.

During the last half of 1939 hospitals served eighty-four persons for an expense of \$2,296.20 and physicians administered to 2935 persons with an expense of \$13,908.98. Drug bills were \$2,830.55 and dental services cost \$1919.50.

Under the health plan, FSA clients may obtain loans

for membership in the county health group, which is supervised by a board of directors, including one physician member who acts in an advisory capacity. Membership funds are allocated by months, and one-twelfth of the total fund is all that can be expended in any month. The plan of payment of bills varies in different counties at the choice of the county medical society. Usually, hospitals and drug bills are paid in full. Doctors and dentists are paid in full if sufficient funds remain or they are paid on a pro-rata basis if funds are not sufficient. Any moneys left over from any month when the maximum is not exceeded are carried to the end of the year and then applied on physicians' bills not previously paid in full. All medical bills are approved by an advisory committee of physicians. Mr. McCarty said that for the period payment was made on 83.8 per cent of all bills submitted.

FSA loans in Kansas for medical purposes were \$69,810 as of December 31, 1939.

LOCATION

The central office is in receipt of the following communication from the Mayor of Bluff City which is located in southeast part of Harper county:

"We are wondering what your recommendations would be with regard to securing a good medical doctor for this town and community. This town has a population of about 3000. Good grade and high school. Surrounded by the best farming land in the state. Made up of the thriftiest of farmers, the territory here will run eight miles south, ten miles east, ten miles north, and five miles west. It will depend on the ability of the doctor. There is no better lay out or territory in this state for a good doctor who wants to make good.

If a good doctor was surgically inclined there is no reason why he could not hold this class of business right here at home. I have been agent for the Santa Fe at this point now 25 years and I believe I know conditions pretty well. We have a good drug store here and a very capable druggist. Nice people make up the community.

If there is any suggestion that you could offer or if you know of some good doctor who might be interested please let us know or send him down and look things over. We assure you we will appreciate any effort you might make to help us out."

WORKMEN'S COMPENSATION

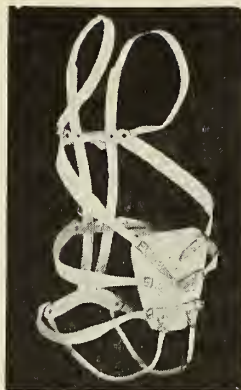
The Kansas State Workmen's Compensation Commission announced on February 15th that it had adopted a new report form for use by physicians in the handling of compensation cases.

The new form is as follows:

1. Name of injured person: Age, sex, color.
2. Address: No. and St., City or Town, State.
3. Name and address of Employer.
4. Date of accident: Hour. Date disability began.
5. State in patient's own words where and how accident occurred.
6. Important. Give accurate description of nature and extent of the injury and fully state your objective findings, for the reason that if the injured workman makes settlement agreement under the law for compensation due, his employer is entitled to final receipt for compensation paid and the Workmen's Compensation Commissioner must

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray



The
W. E. ISLE COMPANY
2nd FLOOR RIEGER BLDG.—1121 GRAND AVE.
TELEPHONE VICTOR 2350
KANSAS CITY, MISSOURI

*Complete Appliance
Service*

Artificial Limbs
Braces—Trusses
Elastic Hose
Surgical Corsets



NEUROLOGICAL HOSPITAL

Twenty-Seventh and The Paseo
Kansas City, Missouri

Modern Hospitalization of
Nervous and Mental Ill-
nesses, Alcoholism and
Drug Addiction.

THE ROBINSON CLINIC

G. WILSE ROBINSON, M.D.
G. WILSE ROBINSON, JR., M.D.

SILVER PICRATE

Wyeth

**Has shown a CONVINCING RECORD* OF
EFFECTIVENESS in ACUTE ANTERIOR URETHRITIS
due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
*Monilia albicans***

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

determine if proper compensation has been paid under the settlement agreement made.

7. Did the injury result in a permanent defect? (This question refers to back injury, bodily disfigurement, mental injury; loss of vision, hearing, feeling, taste or nasal defects.) If so, what?

8. Did the injury result in permanent total disability? If so, state causes.

9. Did the injury result in temporary total disability? If so, give opinion as to duration.

10. Was temporary total disability followed by temporary partial disability? If so, give your opinion as to the percentage of temporary partial disability and its duration.

11. Was temporary total disability followed by permanent partial disability? If so, give your opinion as to the percentage of permanent partial disability.

12. Did the injury result in loss by amputation of any members? (This question refers to fingers, hands, arms, toes, feet, legs, etc.) If so, describe each member and state particularly the location of the amputation, as removal of any portion of a joint may affect compensation due. Describe exact point of amputation on chart on back of this form.

13. Did the injury result in loss of use of any member? If so, describe each member in which loss of use occurred and give your opinion: (a) Period of total loss of use of each; (b) resultant percentage of permanent loss of use of each member.

14. Is accident above referred to the only cause of patient's condition? If not, state contributing causes.

15. Has patient any physical impairment due to previous accident, disease or ailment? Give particulars.

16. Has normal recovery been delayed for any reason? Give particulars.

17. Date of your first treatment. Who engaged your services?

18. Describe treatment given by you.

19. Were X-Ray taken? By whom? When?

20. X-Ray diagnosis.

21. Was patient treated by anyone else? By whom? When?

22. Was patient hospitalized? Name and address of hospital.

23. Date of admission to hospital. Date of discharge.

24. In your opinion, at the time of your final examination, is the patient in need of further medical treatment? If so, for how long?

25. Patient (was—will be) able to resume regular work on.

26. Patient (was—will be) able to resume light work on.

27. If death ensued give date:

(If any of the above questions call for duplication, repetition will not be necessary.)

The form was prepared following a conference between Dr. F. L. Loveland of Topeka, Dr. Milton Miller of Topeka, Dr. J. L. Lattimore of Topeka, and Mr. Erskin Wyman, State Workmen's Compensation Commissioner, to decide ways and means wherein the medical report could be made more accurate, efficient and informative. It will be noted that the questions in the new form have been made more scientifically accurate; that more space has been provided to enable more complete answers; and that certain questions difficult or impossible to answer have been deleted or qualified.

A bulletin issued by the commission announcing the adoption of the new form contains the following comment:

"The importance of the physician's report (Form G)

not only to the employer, his agent, or carrier, and the Commissioner, cannot be over-emphasized. It enables the employer to determine with accuracy the extent of the injury and liability, and furnishes the information for disposing of the case.

The Commissioner now passes upon settlement agreements at the rate of about two hundred per month. His judgment in passing upon the case must be based entirely upon the physician's report as to the description, nature and extent of the injury. Form G, as it is now prescribed, is inadequate to accomplish the purpose for which it was intended, and its importance has never been impressed upon the physicians who prepare the report. Two short lines have been provided on the form for the physician to describe the nature and extent of injury and the objective findings. With the inadequate information provided, the Commissioner has been expected to pass accurate judgment in about two thousand cases a year in which "settlement agreements" are submitted for approval, and without the opportunity of personally examining the claimant as to his injuries or the physician concerning his report. With a view to improving the situation and obtaining better cooperation from the physician making the reports, meetings have been held by the Commissioner with representatives of Kansas physicians. A new form has been designed which will, it is believed, furnish the information necessary to accomplish the purpose of the physician's report without making it a cumbersome document.

Owing to the fact that many employers and their carriers have already purchased supplies of the Form G prescribed in Bulletin No. 24 of this office, it will not be necessary for those who have such supplies to submit their reports on the new form until their supply of the old form has been exhausted. It would be appreciated if the new form would be adopted at once, but it will not be required."

MEETING

The Leavenworth County Medical Society has invited all members of the Society to attend the next meeting of that organization which will be held at Cushing Memorial Hospital in Leavenworth on April 8th, commencing at 7:30 p.m. The speaker will be Dr. L. H. Mousel of the Mayo Clinic in Rochester, Minnesota, who will speak on "Modern Trends in Anesthesia."

Dr. R. S. McKey, President of the Leavenworth County Medical Society, would appreciate hearing from all members who plan to attend in order to assist him in making arrangements for an entertainment event which will be held after the meeting.

RELIEF FUND

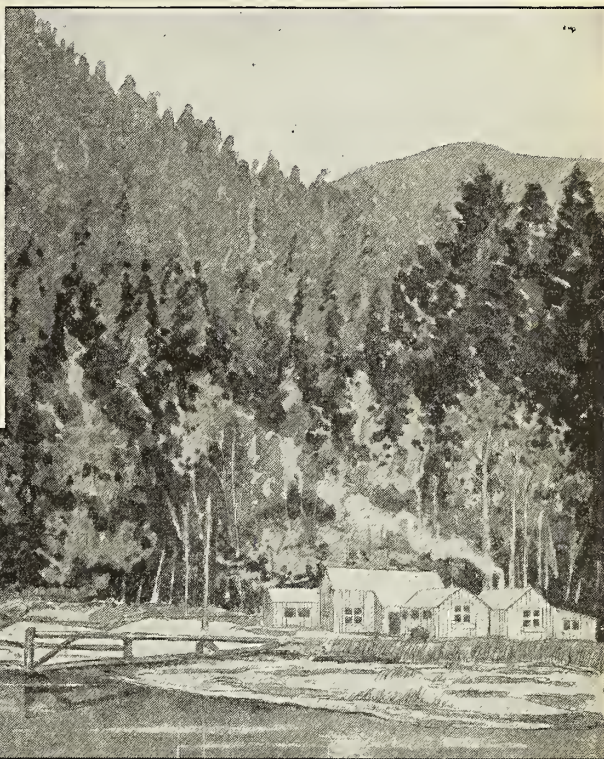
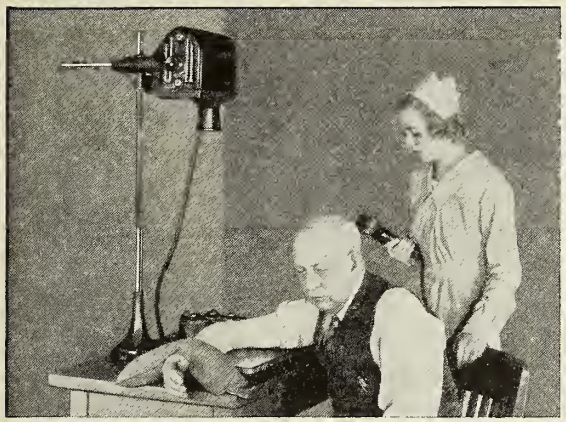
The following information is published at the request of the Finnish Relief Fund, Inc., New York, N. Y.:

The Finnish Relief Fund, Inc., is sponsored by Mr. Herbert Hoover. It is approved by the Finnish Minister in Washington, D. C., His Excellency Hjalmar Procopé.

It has the main purpose of accepting for the Finnish people and transmitting to Finland any funds contributed for this great cause by the American people.

Contributions, unless specifically intended to be used for war material, will be used for food and clothing for the Finnish civilian population, many of whom are suddenly made homeless by having

"It must be EFFICIENT, DEPENDABLE, and PORTABLE"



Nootka Mission Hospital, located in isolated Ceepeecee on the west coast of Vancouver Island off the British Columbia mainland, serves 1500 persons who live and work along a 100-mile stretch of coastline.

THAT'S what the Nootka Mission Hospital required in its x-ray equipment, and the G-E Model F-3 Unit was selected because it met every need.

Efficiency and ease of operation were important. Most of the people in the Ceepeecee area are engaged in hazardous work—mining, logging, millwork, fishing—work that produces a large number of emergency cases.

There could be no question about dependability. It's a long, hard trip to Ceepeecee from the mainland. Mail boats make it every 10 days. Nootka's staff demanded a unit that "could take it," a unit that would require an absolute minimum of servicing—and the Model F-3 filled the bill.

True portability was necessary. Transportation on Vancouver Island is a real problem. There are no roads; all travel is by air and water, and there's no room for "excess baggage."

To every medical man who does not have adequate roentgenological service readily available, and who realizes a need for a compact, efficient, dependable portable x-ray unit, G-E makes this suggestion: Protect your investment by investigating the Model F-3 thoroughly before you invest in any x-ray unit.

GENERAL ELECTRIC X-RAY CORPORATION

2012 JACKSON BLVD.

CHICAGO, ILL., U. S. A.

Please send complete information about the G-E Model F-3 Office-Portable X-Ray Unit. Check here ☐ and we will arrange a demonstration of the F-3 for you in your office.

Name

Address

City

A53

their houses irreparably demolished by the incendiary bombs from Russian aeroplanes.

Members of the American Medical Association are the only doctors who will be asked to contribute through this Fund.

It is hoped the profession will respond as generously as possible. It is further hoped that every doctor will make some contribution, and no matter how small it may be, it will be gratefully accepted. We believe the profession should have one hundred per cent of its members become contributors to this most worthy cause.

No money is deducted for expenses from any contribution made through this Fund, and every dollar donated arrives in Finland worth one hundred cents.

No salaries are paid and no financial remunerations are made to officers on duty with the Finnish Relief Fund. Expert auditors make a daily checkup of the donations acquired and chart the results.

The National Chairman of the Medical Division of the Professional Groups of the Finnish Relief Fund, Inc., is Dr. John Frederick Erdmann of New York.

A director (chairman) for the Medical Division has been or will be appointed from each state who will try to get in touch with every member of the American Medical Association of that state by such method as he deems best.

The Executive Director of the Medical Division is Dr. Kerwin W. Kinard who has offices at Fund Headquarters.

All checks should be made payable to the Finnish Relief Fund, Inc., and sent to the Medical Division of the Finnish Relief Fund, Inc., 420 Lexington Avenue, New York, N. Y.

MEMBERS

Dr. Wayne C. Bartlett of Wichita presented a paper on "Surgery of the Thyroid" and Dr. A. L. Ashmore of Wichita presented a paper on "Diagnosis of Chest Conditions with Special Emphasis on Tuberculosis" at a meeting of the Kay County Medical Society at Ponca City, Oklahoma, on February 22nd.

Dr. John H. Basham of Eureka was recently appointed county health officer of Greenwood county.

Dr. Jesse V. Ferrell who has practiced in Kansas City, Missouri, for fifteen years has recently returned to Louisville.

Dr. K. W. Haworth formerly of Wichita has recently moved to Pratt. He has also been appointed as county health officer of Pratt county.

Dr. M. W. Wells formerly of Moran has located in LeRoy.

Drs. Maurice A. Walker and Lewis G. Allen of Kansas City are the co-authors of a case report published in the February issue of Radiology entitled "Air in Knee After Trauma."

Speakers at the February 26th meeting of the University of Kansas Medical Society held in the Children's Pavilion were as follows: Dr. C. B. Francisco of Kansas City, Missouri, and Dr. James B. Weaver, of Kansas City, Missouri, who spoke on "Pseudo-Fractures," discussion was by Dr. Galen Tice, of Kansas City. Mr. Harold P. Brown of Kansas City, Missouri, professor of the University of Kansas City

and chemist for the George A. Breon Company spoke on "Chemistry of Sulfanilamide," which was discussed by Dr. C. J. Weber of Kansas City. Officers of the society for the coming year are: Dr. Nelse F. Ockerblad of Kansas City, Missouri, President; Dr. R. I. Canuteson of Lawrence, Vice-President; Dr. Tom R. Hamilton of Kansas City, Secretary-Treasurer.

COUNTY SOCIETIES

The Anderson County Medical Society met February 1st to discuss a county health service plan. Speakers for the meeting were: Mr. B. E. Winchester, and Mr. H. Glen Knight, state and county representatives, respectively, of the Farm Security Administration.

The Central Kansas Medical Society held their quarterly meeting on March 7th at Hays. Dr. Charles E. Walker, Jr., of Denver discussed "Eye Conditions of Interest to the General Practitioner"; Dr. Warren W. Tucker of Denver discussed "X-Ray Diagnosis of Placenta Previa" and Dr. Daniel R. Higbee of Denver spoke on "Tumors of the Kidney." Several state officers of the Kansas Women's Auxiliary attended a dinner of the society held following the afternoon scientific meeting.

The Commanche County Medical Society held a meeting on February 12th in Coldwater. The following officers were elected: President, Dr. R. A. J. Shelley of Coldwater; Secretary-Treasurer, Dr. D. O. Howard of Protection; Delegate, Dr. Maurice Gage of Coldwater.

The Clay County Medical Society held a meeting on February 21st in Clay Center. Dr. R. B. McVay recently elected Secretary-Treasurer resigned and Dr. G. W. Bale of Clay Center was elected to the office. Mr. John H. Shirkey of Topeka spoke on the Farm Security Administration medical program.

The members of the Douglas County Medical Society were the guests of the Watkins Memorial Hospital staff at a meeting held at the hospital on February 6th. Papers were presented by Dr. R. I. Canuteson, Lawrence, who spoke on "Tuberculosis Case Findings in University of Kansas Students" and Dr. G. M. Tice of Kansas City, who discussed "The Use of X-Ray in Tuberculosis Findings."

The Ford County Medical Society held a meeting on March 8th at Dodge City. Dr. A. J. Dillon of Larned gave a talk on "What The General Practitioner Should Know About Insanity."

Franklin County Medical Society held a meeting February 1st at Ottawa with installation of the following officers for 1940: President, Dr. J. F. Barr of Ottawa; Vice-President, Dr. J. R. Henning of Ottawa; Secretary, Dr. F. A. Trump of Ottawa; and Treasurer, Dr. P. R. Young of Ottawa.

The Marion County Medical Society met at Marion on February 7th. Dr. A. G. Isaacs of Newton spoke on "Less Common Causes of Renal Pain" and Dr. A. K. Ratzlaff of Hillsboro presented a Case Report on "Chronic Pancreatitis."

The Mead-Seward County Medical Society held a dinner meeting at Liberal on February 25th, with the wives of the members as guests. Speakers for the meeting were: Dr. N. A. Melencamp of Dodge City; Dr. C. O. May of Liberal; Dr. Leon W. Zimmerman of Liberal; Dr. Robert Drake of Liberal; and Dr. E. J. McCreight of Liberal.

Cook County Graduate School of Medicine

(In Affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue every two weeks. General Courses One, Two, Three and Six Months; Clinical Course; Special Courses.

MEDICINE—Personal One Month Course in Electrocardiography and Heart Disease every month, except August. Intensive Personal Courses in other subjects.

FRACTURES & TRAUMATIC SURGERY—Ten Day Intensive Course starting April 22, 1940. Informal Course Every week.

GYNECOLOGY—Two Weeks Course April 22, 1940. One Week Personal Course Vaginal Approach to Pelvic Surgery, April 8, 1940.

OBSTETRICS—Two Weeks Course April 8, 1940. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks Course starting April 8, 1940. Informal course every week.

OPHTHALMOLOGY—Two Weeks Course starting April 22, 1940. Informal Course every week.

CYSTOSCOPY—Ten Day Practical Course rotary every two weeks. One Month and Two Weeks Course in Urology every two weeks.

ROENTGENOLOGY—Special Courses X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

**TEACHING FACULTY—ATTENDING STAFF OF
COOK COUNTY HOSPITAL**

Address: Registrar, 427 South Honore Street,
Chicago, Illinois

PROFESSIONAL PROTECTION

SINCE 1899
SPECIALIZED
SERVICE

A DOCTOR SAYS:

"Were my policy to cost several hundred dollars, instead of your nominal premium, I would feel that it was the best investment that I ever made."

THE

MEDICAL PROTECTIVE COMPANY

OF FORT WAYNE, INDIANA

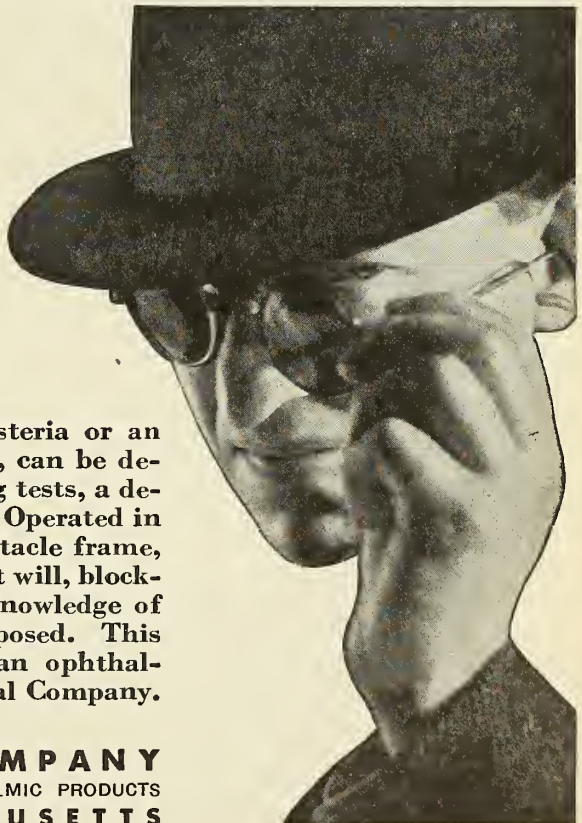
WHEATON, ILLINOIS

DON'T BE FOOLED

— By *Fakers*

Fake blindness, whether induced by hysteria or an attempt to defraud an insurance company, can be detected readily with the Polaroid malingering tests, a development by American Optical Company. Operated in conjunction with Polaroid lenses in a spectacle frame, the Polaroid axis in a slide can be changed at will, blocking out vision of either eye without the knowledge of the patient . . . and fake blindness is exposed. This is but one of the many precision American ophthalmic instruments made by American Optical Company.

AMERICAN OPTICAL COMPANY
WORLD'S OLDEST AND LARGEST MAKERS OF OPHTHALMIC PRODUCTS
SOUTHBRIDGE, MASSACHUSETTS



The Pratt County Medical Society held a meeting on February 23rd in Pratt. Speakers were: Dr. R. L. Drake of Wichita who discussed "Insulin Shock Treatment" and Dr. E. L. Cooper of Wichita who spoke on "Post Partum Sterilization."

The Republic County Medical Society met February 1st and elected the following officers for 1940: President, Dr. C. V. Haggman of Scandia; Vice-President, Dr. F. C. Tyree, of Wayne; Secretary-Treasurer, Dr. Paul L. Beiderwell, of Belleville; Delegate, Dr. M. D. McComas, of Courtland. Out of town speakers were: Dr. F. L. Loveland, of Topeka, and Dr. John Porter, of Concordia.

The Shawnee County Medical Society held a meeting on March 4th in Topeka. Speakers for the meeting were: Dr. C. B. Trees of Topeka who discussed "The Use of Carrel-Dakin Solution in the Treatment of Compound Fractures"; Dr. L. A. Smith of Topeka who spoke on "Perianal and Perirectal Infections"; and Dr. G. F. Helwig of Topeka who spoke on "Blood Transfusions." Dr. W. F. Bowen of Topeka, president of the Kansas Medical Society in 1935 was unanimously elected an honorary member of the Shawnee County Medical Society at the February meeting of that group.

The Stafford County Medical Society held a business meeting on February 7th in Stafford.

The Wilson County Medical Society met February 12th in Fredonia. A new indigent plan and an immunization program for that county were discussed.

The Wyandotte County Medical Society met on March 5th. Dr. P. T. Bohan of Kansas City, Missouri, discussed the "Clinical Approach to the Recognition of Functional Diseases."

DEATH NOTICES

Dr. Robert Emmete Eagan, 70 years of age, formerly of Spring Hill, died February 1st in Long Beach, California, of cerebral hemorrhage. Dr. Eagan was born November 11, 1870, in Charleston, West Virginia. He was graduated from the Louisville Medical College, Louisville, Kentucky, in 1896 and came to Spring Hill in 1904. He enlisted in the Medical Corps and was stationed at Ft. Riley during the World War. In 1933 he retired from active practice and has since lived in Long Beach. He was an honorary member of the Johnson County Medical Society.

Dr. Charles E. Gaston, 69 years of age, died February 16th at Blue Rapids. Dr. Gaston was graduated from the University Medical College of Kansas City in 1902 and has practiced in Frankfort for eight years. He was a member of the Marshall County Medical Society.

Dr. Alvin F. Harrison, 73 years of age, died February 24th at Topeka. Dr. Harrison was graduated from the University Medical College of Kansas City in 1895. He practiced first in Scranton and came to Topeka in 1910. He was a member of the Shawnee County Medical Society.

OBSERVATION ON THE EYES DURING METRAZOL TREATMENT

(Continued from Page 101)

ing the seizure the anterior chambers were of normal depth again, the pupils were normal and the ophthalmoscopic examination negative.

J. G.: The pupils contracted with the onset of the seizure, gradually dilated during the attack and were contracted again and inactive to light at the end of

the convulsion. Following the attack they presented a peculiar irritability or instability in that they were alternately contracting and dilating. (This has also been observed during insulin shock therapy). Five and three-fourths minutes following the end of the seizure, intra-ocular tension was 25/30 (Bailliart) which is a slight but very definite increase in the intra-ocular tension which was originally 20/21. Eleven minutes following the end of the seizure, there was definite deepening of the anterior chamber of each eye. At this time the tension was 20/20, pupillary reaction to light was uncertain or absent and the pupils were 2 mm. smaller than before the seizure. Twelve minutes following the attack the pupils were sluggish to light stimulation and the ophthalmoscopic examination was negative. Twenty-seven minutes after the attack the patient complained bitterly of frontal headache, which apparently lasted for only a few minutes.

Thirty-two minutes after the end of the seizure there developed an inequality of the pupils amounting to 1 mm., which persisted for thirty-seven minutes. Forty minutes following the attack there was no reaction to accommodation. Normal accommodative response did not occur until thirteen minutes later. Although there had been no previous evidence of any change in retinal vessels or alteration of retinal circulation, there occurred at 2:21 p. m., or approximately fifty minutes after the end of the seizure a marked engorgement of the retinal veins, at which time the vessels had assumed a 4:2 ratio. This condition persisted for twenty-two minutes. At 2:43 p. m. or one hour and thirteen minutes following the seizure the ophthalmoscopic examination was entirely negative.

SUMMARY

Marked alteration in the size and reaction of the pupils to light was observed. There was an initial marked pupillary constriction with loss of pupillary reaction to light. This was followed during the seizure by a gradual dilatation. At the end of the seizure the pupils were again contracted but very unstable under strong light. There was gradual restoration of normal reaction to light and accommodation.

No noticeable change was present in the retinal circulation during or immediately following the seizure but after fifty minutes engorgement of the retinal veins was observed.

Sub-conjunctival hemorrhages occurred during a seizure.

Transient wide horizontal nystagmus occurred two minutes following a convulsion.

No significant changes in intraocular tension were observed.

Definite transient deepening of the anterior chambers was noted a few minutes following the seizures.

Karo for Under-nutrition

Formulas . . .

KARO added to milk mixtures provides (volume for volume) twice as many calories as powdered maltose-dextrins-dextrose. Hence its convenience as an addition to concentrated feedings.

Foods

KARO added to foods is a valuable aid in high caloric feeding—for KARO is relished with milk, fruit and fruit juices, vegetables and vegetable waters, cereals, breads and desserts.



*Inquiries from Physicians are invited
... for further information write*

CORN PRODUCTS REFINING COMPANY
17 BATTERY PLACE • NEW YORK CITY

ST. JOSEPH CLINICAL SOCIETY

The St. Joseph Clinical Society will present its ninth annual two-day spring clinic on March 20-21, at the Hotel Robidoux, St. Joseph, Missouri. There will be no registration fee. The speakers will offer what is virtually a concentrated post-graduate course in recent advances in clinical medicine and surgery that will appeal particularly to the general practitioner. The pre-convention evening meeting, open to the public, will be addressed by Dr. Paul C. Barton, who is a member of the Bureau of Investigation of the American Medical Association, whose subject will be "Patent Medicine—Old and New."

There will be two noon luncheon gatherings at which presentations and round table discussions will follow. Two banquets will be followed by lectures and entertainment, the first in conjunction with the Buchanan County Medical Society.

The speakers, and the topics of their lectures, is as follows:

Dr. Robert Elman, St. Louis, Mo. "Intravenous Fluids in the Surgical Patient with Special Reference to Protein Replacement."

Dr. Emil Hauser, Chicago, Ill. "Low Back Pain Due to Functional Decompensation."

Dr. Lee Forrest Hill, Des Moines, Iowa. "Changes Produced by Severe Diarrhea and Their Reconstitution."

Dr. Virgil E. Simpson, Louisville, Ky. "Criteriae for Classification and Diagnosis of Heart Disease."

Dr. Virgil E. Simpson (Banquet) "Chemo-Therapy of Pneumonia."

Dr. C. W. Mayo, Rochester, Minn. (Banquet) "Malignancy of the Right Colon."

Dr. Leo C. Rigler, Minneapolis, Minn. "Roentgen Diagnosis of Acute Abdominal Conditions" and "Bronchial Asthma."

Dr. William B. Kountz, St. Louis, Mo. "The Heart and Vascular System in Middle Age and Its Importance on Clinical Medicine."

Dr. Paul A. O'Leary, Rochester, Minn. "The Eczemas" and "Treatment of Syphilis." (Banquet.)

Dr. J. C. Birdsall, Philadelphia, Pa. "Incidence of Urinary Tract Obstruction in Renal Disease."

Dr. Lester D. Powell, Des Moines, Iowa. "Consideration and Surgical Treatment of Uterine Prolapse."

Dr. Lathan A. Crandall, Jr., Memphis, Tenn. "Vitamin B. and Functional Digestive Disturbances."

in advance of the date of the examination they desire to take.

The next written examination for 1940 will be given on October 21st. Applications for this examination must be filed in the Secretary's office by September 1st. Application forms may be obtained from Dr. William S. Middleton, Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin.

Soldiers' identification tags: "The identification tag that every soldier in the German army must wear around his neck will henceforth indicate the blood group to which he belongs (information necessary for blood transfusion)," the regular Berlin correspondent of The Journal of the American Medical Association reports in the Feb. 24 issue.

AUXILIARY

PRESIDENT'S MESSAGE

March is here and another blanket of snow has covered our fields and by-ways. Surely the crops will yield and bring forth much gladness in the hearts of men this spring.

A letter has just come from our Organization Chairman, and from her message it looks as though two or three new county auxiliaries will be formed. Is that not encouraging news? I was indeed grateful to hear that some of the groups, who, heretofore have shown little interest, are actively engaged in the study of subjects which have to do with the future of medicine. Our ladies are learning that in our quiet unassuming way we can do much to spread the knowledge and information, among the laity and in other organizations to which we may belong, for the benefit of our doctors.

The Woman's Auxiliary to The Kansas Medical Society stands ready and anxious to do her part in any way that our doctors see fit to use us.

As the different auxiliaries come now to the time of election, may I urge you to select interested, capable leaders to carry on the work of our great organization.

—Mrs. La Verne B. Spake

AUXILIARY NOTES

Have you made your hotel reservations for the 18th Annual Convention of the Women's Auxiliary to the American Medical Association which will be held in New York City, June 10 to 14, 1940?

The headquarters are at the Hotel Pennsylvania and we are sure you will not want to miss this convention which promises to be an outstanding one. MAIL YOUR RESERVATIONS TODAY to Dr. Peter Irving, Housing Bureau, Room 1036, 233 Broadway, New York City.

ANNOUNCEMENTS

The American Board of Internal Medicine, Inc. will conduct oral examinations just previous to the meeting of the American College of Physicians in Cleveland and just in advance of the meeting of the American Medical Association in New York City.

Applicants who have successfully passed the written examination and plan to take the oral examination in 1940, should advise the office of the Secretary at least six weeks

DEPENDABLE PRODUCTS for PHYSICIANS

Pharmaceuticals, Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled.

Zemmer

Write For Catalog
Chemists to the Medical Profession
THE ZEMMER COMPANY
Oakland Station, Pittsburg, Pa.
KA3-40

86c out of each \$1.00 gross income
used for members benefit

**Physicians Casualty Association
Physicians Health Association**



**HOSPITAL
ACCIDENT
SICKNESS
INSURANCE**



For ethical practitioners exclusively
(50,000 POLICIES IN FORCE)

Liberal Hospital Expense Coverage for \$10.00 Per Year

\$5,000.00 accidental death	For
\$25.00 weekly indemnity, health and accident	\$33.00 per year

\$10,000.00 accidental death	For
\$50.00 weekly indemnity, health and accident	\$66.00 per year

\$15,000.00 accidental death	For
\$75.00 weekly indemnity, health and accident	\$99.00 per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

\$9,000,000 PAID FOR CLAIMS

\$200,000 deposited with State of Nebraska for protection of our members.

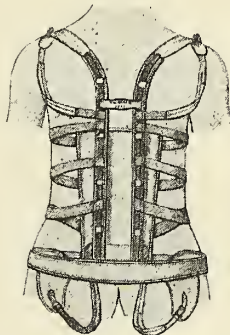
Disability need not be incurred in line of duty—benefits from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

BACK BRACE

For correction of faulty posture,
severe sacro-iliac strain, and convalescent treatment of fracture of spine.

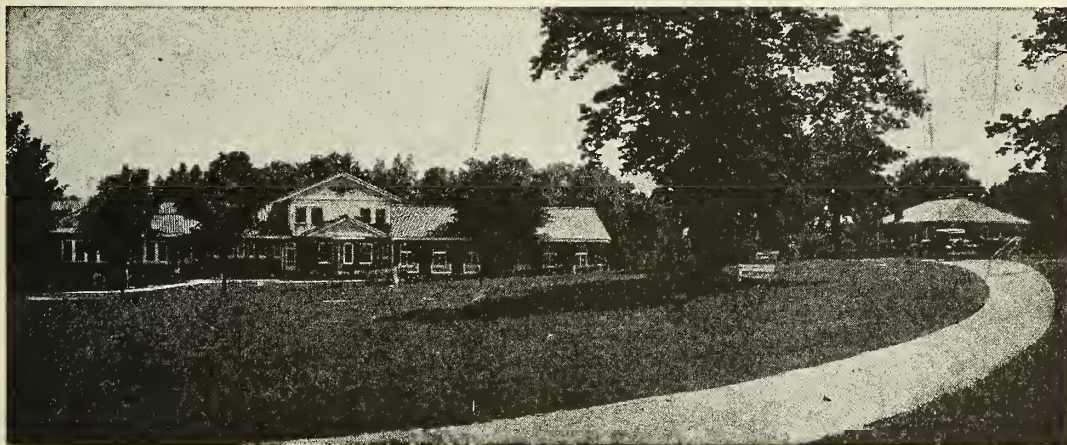


P. W. HANICKE MFG. CO.

1013 McGee Street

KANSAS CITY, MO.

Tel. Victor 4750



OAKWOOD SANITARIUM

The beauty and quietness of the environment of Oakwood Sanitarium cannot be over emphasized. This makes the Institution ideal not only for nervous and mental patients but for convalescents and rest cures as well. Alcoholics and drug addicts are accepted.

Illustrated Booklet and Rates on Request

OAKWOOD SANITARIUM
Tulsa, Oklahoma, Route 6

NED R. SMITH, M.D.
Resident Medical Director

AUXILIARY NEWS

The 18th annual convention of the Woman's Auxiliary to the American Medical Association will be held in New York City, June 10-14, 1940, with headquarters in the Hotel Pennsylvania. In view of the fact that the second edition of the World's Fair will accelerate advance hotel reservations, it is urged that reservations be made immediately, thru the Housing Bureau which has been set up by the American Medical Association, namely Dr. Peter Irving, room 1036, 233 Broadway, New York City.

The Labette County Auxiliary met January 24 at the home of Mrs. L. A. Proctor. A public relations tea was discussed during the business session. Mrs. McGinnis gave a paper, "The Life of Florence Nightingale."

The Labette Auxiliary has found a use for a usually considered perfectly useless thing—ordinary cancelled postage stamps. The auxiliary is collecting all it possibly can and is sending them to the Swedish National Sanitarium at Denver, a charitable institution. It is said that a pound of canceled stamps will provide enough funds to care for a patient three years. The stamps are sold to stamp collecting agencies. The auxiliary reports fine results from this activity.

Mrs. L. A. Proctor, Mrs. T. D. Blasdel or Mrs. S. C. McGinnis, all of Parsons, will be glad to receive your stamps.

Meetings in Wichita, Pratt and Dodge City planned in anticipation of visits to the respective auxiliaries by Mrs. La Verne B. Spake, our State President, were necessarily postponed when Mrs. Spake's visits were canceled because of the death of her brother. The postponed meetings probably will be held in March.

THE STOKES HOSPITAL

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

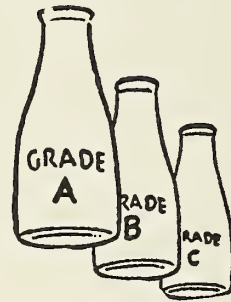
E. W. STOKES, Med. Dir.

923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102

The Sedgwick County Auxiliary Board met with Mrs. C. H. Warfield on February 4 for a one o'clock luncheon and business meeting. Plans were made for the auxiliary meeting in Wichita at the University Commons Building with Mrs. La Verne B. Spake as guest of honor.

Mrs. E. S. Edgerton, of Wichita, is chairman of the Red Cross surgical dressings committee, which is preparing 1700 surgical dressings for the Finns. Mrs. Louis Roberts, Mrs. M. W. Hall and Mrs. Charles Rombold, all of the Sedgwick County Auxiliary are, also, members of this committee.

Mrs. W. G. Emery, Chairman
Press-Publicity



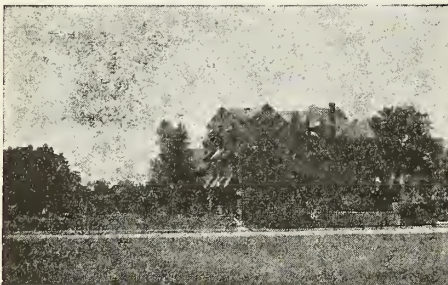
YOUR PATIENTS TOO
APPRECIATE GRADE A Rx WORK

•
**QUINTON-DUFFENS
OPTICAL COMPANY**

Your Local Independent Wholesaler

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the
A.M.A.

The Journal Of
THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

APRIL, 1940

Number 4

Greetings

The Sedgwick County Medical Society as host for the eighty-first annual meeting of the Kansas Medical Society wishes to extend a cordial invitation to every Kansas physician to become our guest for four days of post-graduate study, relaxation, and a general good time.

The committees responsible for arranging this meeting have made a real effort to provide scientific study, entertainment, social contacts and sports in such a varied assortment, that every individual will be able to find interest for every facet of his character. This being primarily a scientific meeting, special effort is being directed toward building a strong and well-rounded program of scientific subjects. However, from personal observation, it seems quite apparent that the golf, the shoot, the entertainment, and in fact every sub-committee regards its part of this meeting as the most important.

So it remains our sincere hope that our guests will have as much pleasure in attending this meeting as has this county society as host in preparing for you.

RAY A. WEST, M.D.,

President, Sedgwick County Medical Society.

Guest Speakers



JULIAN DEIGH BOYD, M.D.,

Iowa City, Iowa

Associate Professor of Pediatrics, State University of Iowa College of Medicine; Department of Pediatrics, Children's Hospital, Iowa City

SPECIALTY: Pediatrics

CHARLES EDWIN GALLOWAY, M.D.,

Evanston, Illinois

Assistant Professor of Obstetrics and Gynecology, Northwestern University School of Medicine; Obstetrician and Gynecology at Evanston Hospital.

SPECIALTY: Obstetrics and Gynecology.



STUART W. HARRINGTON, M.D.,

Rochester, Minnesota

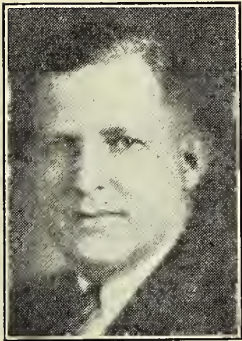
Head of Section of General Thoracic Surgery of the Mayo Clinic; Professor of Surgery, Graduate School of the University of Minnesota, Mayo Foundation.

SPECIALTY: Surgery.

T. LEON HOWARD, M.D.,*Denver, Colorado*

Associate Professor of Urology, University of Colorado School of Medicine; Staff Member, Mercy Hospital, Jewish Hospital for Consumptives, Children's Hospital, and St. Anthony's Hospital in Denver, President-Elect of The American Urological Association.

SPECIALTY: Urology.

**DEAN McALLISTER LIERLE, M.D.,***Iowa City, Iowa*

Professor of Otolaryngology, State University of Iowa College of Medicine; Associate Examiner of the American Board of Otolaryngology.

SPECIALTY: Otology, Laryngology, Rhinology.

EARL D. McBRIDE, M.D.,*Oklahoma City, Oklahoma*

Assistant Professor of Orthopaedic Surgery, University of Oklahoma School of Medicine; Chief Surgeon and Director Bone and Joint Hospital, McBride Clinic in Oklahoma City, Attending Orthopaedic Surgeon St. Anthony's Hospital, Wesley Hospital and Oklahoma General Hospital in Oklahoma City.

SPECIALTY: Orthopaedic Surgery.



Guest Speakers



RAYMOND W. McNEALY, M.D.,

Chicago, Illinois

Associate Professor of Surgery, Northwestern University School of Medicine; President of the Attending Staff of Cook County Hospital, and Chief Surgeon and President of the Attending Staff of Wesley Memorial Hospital in Chicago.

SPECIALTY: Surgery.

CECIL S. O'BRIEN, M.D.,

Iowa City, Iowa

Professor and Head of the Department of Ophthalmology, State University of Iowa College of Medicine.

SPECIALTY: Ophthalmology.



WILLIAM H. OLMSTED, M.D.,

St. Louis, Missouri

Assistant in Medicine and Instructor and Associate Professor of Clinical Medicine, Washington University School of Medicine; Assistant Physician, Barnes Hospital; Physician on General Staff, Jewish Hospital in St. Louis.

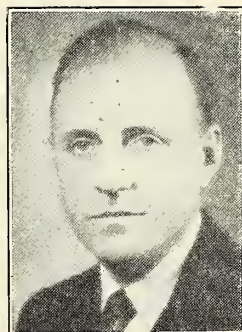
SPECIALTY: Internal Medicine.

WALTER LINCOLN PALMER, M.D.,

Chicago, Illinois

Associate Professor of Medicine, School of Medicine of the Division of Biological Science, University of Chicago.

SPECIALTY: Internal Medicine.



REV. ALPHONSE M. SCHWITALLA, S.J., Ph.D., A.M., LL.D., D.Sc.,

St. Louis, Missouri

Dean, St. Louis University School of Medicine and St. Louis University School of Nursing; Regent St. Louis University School of Dentistry; President of the Catholic Hospital Association of the United States and Canada; Editor of Hospital Progress; Professor of Biology and Director of the Department of Biology of St. Louis University.

SOMA WEISS, M.D.,

Boston, Massachusetts

Hersey Professor of the Theory and Practice of Physic, Harvard University; Peter Bent Brigham Hospital in Boston.

SPECIALTY: Internal Medicine.



Guest Speakers



ARTHUR COVEL CURTIS, M.D.,

Ann Arbor, Michigan

Associate Professor of Internal Medicine, University of Michigan, School of Medicine.

SPECIALTY: Internal Medicine

ERSKINE WYMAN, LL.B.,

Topeka, Kansas.

Workman's Compensation Commissioner, State of Kansas.

Member Speakers

ORVILLE R. CLARK, M.D., Topeka, Kansas.

RALPH H. MAJOR, M.D., Professor of Medicine, University of Kansas School of Medicine.

D. V. CONWELL, M.D., Halstead, Kansas.

THOMAS G. ORR, M.D., Professor of Surgery, University of Kansas School of Medicine.

E. R. GELVIN, M.D., Concordia, Kansas.

J. W. RANDELL, M.D., Marysville, Kansas.

C. C. HAWKE, M.D., Winfield, Kansas.

R. E. SPEIRS, M.D., Dodge City, Kansas.

F. P. HELM, M.D., Secretary of the Kansas State Board of Health, Topeka, Kansas.

A. A. SPRONG, M.D., Sterling, Kansas.

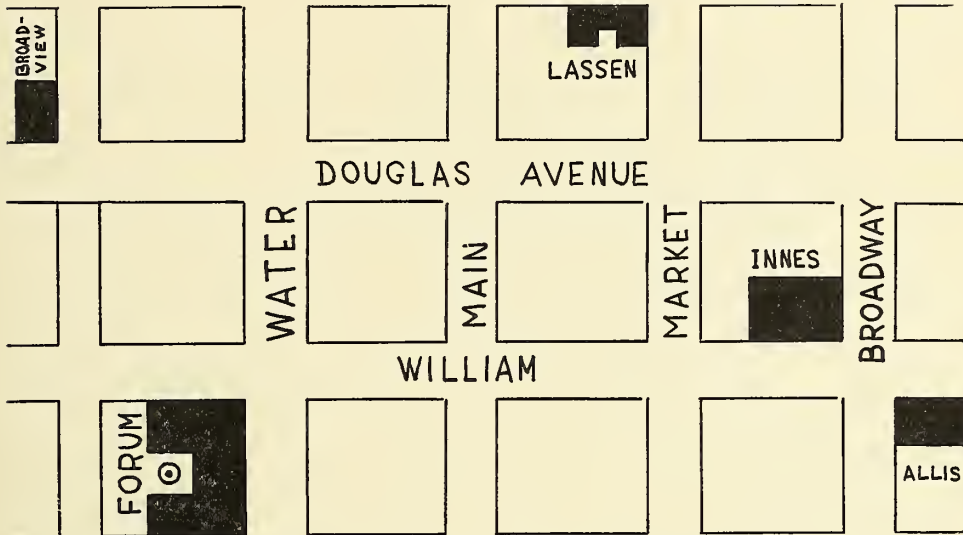
KARL VOLDENG, M.D., Wellington, Kansas.

UNITED STATES CIRCUIT COURT OF APPEALS

Opinion on Use of Narcotics by Osteopaths—Page 176

PLACE OF MEETING

The Wichita Forum was selected as the place of meeting for this year's annual session by reason of its central location and its ample space. The building is located at the intersection of Williams and Water Streets, in the Southwestern portion of the Wichita business district.



WICHITA—MEETING PLACES AND HOTELS

All events of the meeting with the exception of the round table luncheons, the alumni banquet, the house of delegates meetings, the annual banquet and the golf and trap tournaments will be held at the Forum. As is described elsewhere in this issue, the round table luncheons will be held at the Lassen, the Allis and the Broadview Hotels, the alumni banquet at the Broadview Hotel, the house of delegates at the Allis Hotel, the annual banquet at the Innes Tea Room, the annual stag banquet at the Wichita Country Club, the golf tournament at the Wichita Country Club and the trap tournament at the Wichita Gun Club.

SEDGWICK COUNTY COMMITTEES

As host, the Sedgwick County Medical Society has made all arrangements for the Eighty-first Annual Session. Serving as general chairman of the session is Charles Rombold, M.D. Chairmen of the various committees are: Arthur W. Fegtly, M.D., Treasurer; John L. Kleinheksel, M.D., Program; James S. Hibbard, M.D., Scientific Exhibits; Norris L. Rainey, M.D., Arrangements; George E. Milbank, M.D., Technical Exhibits; J. Stanley Reifsneider, M.D., Publicity; Frank L. Menehan, M.D., Entertainment; C. C. Brown, M.D., Physician Assistants; James W. Shaw, M.D., and George B. Morrison, M.D., Golf and Skeet; Chester H. Warfield, M.D., Greeters; and C. D. McKeown, M.D., Purchasing Agent.

Schedule of Events

81ST ANNUAL SESSION

THE KANSAS MEDICAL SOCIETY

*Wichita, May 13, 14, 15, 16, 1940***MONDAY, MAY 13**

9:00 A. M. TOURNAMENT KANSAS MEDICAL GOLFING ASSOCIATION

Wichita Country Club (840 North Yale)

10:00 A. M. TOURNAMENT KANSAS MEDICAL SKEET AND TRAP-SHOOTING ASSOCIATION

Wichita Gun Club (Three miles west on Cannonball Highway)

6:30 P. M. ANNUAL STAG BANQUET

Wichita Country Club

TUESDAY MORNING, MAY 14

REGISTRATION—North Entrance of Forum, Open 8 A.M. to 6 P.M.

8:00 A. M. OPENING OF SCIENTIFIC AND TECHNICAL EXHIBITS

Rose Room, Forum

FIRST GENERAL SESSION

Arcadia Theater, Forum

Presiding: Ray A. West, M.D., Wichita, Kans.

9:00 A. M. A CLINICAL APPROACH TO THE MIGRAINE PROBLEM—PREVENTIVE TREATMENT

D. V. Conwell, M.D., Halstead, Kans.

Discussion: Dr. W. H. Algie, Kansas City, Kans.

9:50 A. M. THE DOCTOR'S OWN DIET

William H. Olmsted, M.D., St. Louis, Mo.

The paper emphasizes the necessity of the doctor being a source of information regarding normal diet to his patients. If he knows the normal diet it might be well for him to practice it himself. Simple rules that can easily be remembered are given to insure the proper intake of the important nutriment.

10:20 A. M. INTERMISSION

10:55 A. M. PRE- AND POST-OPERATIVE MANAGEMENT OF GALL BLADDER PATIENTS

R. W. McNealy, M.D., Chicago, Ill.

The relationship is so close between the gall bladder and the other organs of digestion that the hazard in operation is increased by dysfunctions present in the liver, pancreas, and kidneys. A careful study of their degree of involvement must be made; also, a thorough inspection of the abdominal viscera before confining attention to the gall bladder. Very important, of course, is adequate pre-operative preparation which will pay very liberal rewards in gall bladder surgery.

11:30 A. M. THE VALUE OF DIAGNOSTIC BRONCHOSCOPY AND
ESOPHAGOSCOPY IN GENERAL PRACTICE

Dean M. Lierle, M.D., Iowa City, Iowa

ROUND TABLE LUNCHEONS

(12:15 P.M. to 1:30 P.M.)

MEDICINE—Lassen Hotel, Colonial Room

Guests: William H. Olmsted, M.D., St. Louis, Mo.

Walter L. Palmer, M.D., Chicago, Ill.

Presiding: George E. Milbank, M.D., Wichita, Kans.

SURGERY—Allis Hotel, Ballroom

Guests: R. W. McNealy, M.D., Chicago, Ill.

Stuart W. Harrington, M.D., Rochester, Minn.

Presiding: Wayne C. Bartlett, M.D., Wichita, Kans.

OBSTETRICS & GYNECOLOGY—Lassen Hotel, Aeronautics Room

Guest: Charles Edwin Galloway, M.D., Evanston, Ill.

Presiding: Howard C. Clark, M.D., Wichita, Kans.

EYE, EAR, NOSE AND THROAT—Broadview Hotel, Blue Room

Guests: C. S. O'Brien, M.D., Iowa City, Iowa

Dean M. Lierle, M.D., Iowa City, Iowa

Presiding: E. M. Seydell, M.D., Wichita, Kans.

TUESDAY AFTERNOON, MAY 14

1:00 P. M. SPECIAL MEETING, HOUSE OF DELEGATES

Allis Hotel, Ballroom

SECTION ON MEDICINE

Arcadia Theater, Forum

Presiding: Allen Olsen, M.D., Wichita, Kans.

2:00 P. M. DIAGNOSTIC CLINIC ON FEEBLEMINDEDNESS

C. C. Hawke, M.D., Winfield, Kans.

2:50 P. M. TETANUS—A REPORT OF THREE CASES

J. W. Randell, M.D., Marysville, Kans.

Discussion: E. S. Edgerton, M.D., Wichita, Kans.

3:30 P. M. INTERMISSION

3:50 P. M. THE TREATMENT OF PEPTIC ULCER

Walter L. Palmer, M.D., Chicago

The therapy of peptic ulcer is considered from the standpoint of the factors known to be operative in the etiology and pathogenesis of the lesion and from the standpoint of practical results. The value of rest, of co-operation and understanding on the part of the patient, of diet and of antacids is discussed. The importance of careful and repeated objective roentgenologic and gastroscopic studies is emphasized. The general indications for surgical treatment are considered, as are the "intractable" cases. The management of "ulcer formers" is discussed.

4:25 P. M. RADIATION OF LEUKEMIA

A. A. Sprong, M.D., Sterling, Kans.

Discussion: H. H. Woods, M.D., Topeka, Kans.

SECTION ON SURGERY

Surgery Room, Forum

Presiding: Willard J. Kiser, M.D., Wichita

2:00 P. M. RECTAL CARCINOMA

Karl Voldeng, M.D., Wellington, Kans.

Discussion: M. A. Walker, M.D., Kansas City, Kans.

2:45 P. M. DIAGNOSIS AND SURGICAL TREATMENT OF
DIAPHRAGMATIC HERNIAS

Stuart W. Harrington, M.D., Rochester, Minn.

The clinical recognition of diaphragmatic hernia from the subjective symptoms alone, is often very difficult. The symptoms produced often stimulate the symptomatology of other diseases of the abdomen and thorax. The only treatment that will insure complete relief of symptoms is the operative replacement of the herniated viscera, and repair of the hernial opening. In this paper a brief summary of the chief clinical considerations and surgical management of 230 diaphragmatic hernias of various types is given.

3:30 P. M. INTERMISSION

3:50 P. M. THE PREVENTION OF PRE-ECLAMPTIC TOXEMIA

Charles Edwin Galloway, M.D., Evanston, Ill.

The chief factor in the prevention of pre-eclamptic toxemia is early and close contact with one's patient by means of frequent examinations. The six prime factors which enter into the prevention of toxemia are: weight gain of the patient, the systolic and diastolic blood pressure readings, the analysis of the urine, knowledge of the patient's dietary habits, the general physical examination, and lastly, if available, a knowledge of the blood chemistry of the individual. These points will be discussed and the routine office procedure of the author will be outlined to illustrate how such patients are handled in the office.

4:25 P. M. IMMEDIATE REPAIR OF FLEXOR TENDONS

R. E. Speirs, M.D., Dodge City, Kans.

Discussion: W. C. Bartlett, M.D., Wichita, Kans.

6:00 P. M. ALUMNI ROUNDUP BANQUET

Roof Garden, Broadview Hotel

8:30 P. M. HOUSE OF DELEGATES

Allis Hotel, Ballroom

WEDNESDAY MORNING, MAY 15

REGISTRATION—North Entrance of Forum. Open 8 A.M. to 6 P.M.

SECTION ON MEDICINE

Arcadia Theater, Forum

Presiding: Earl Mills, M.D., Wichita, Kans.

9:00 A. M. TREATMENT OF EDEMA

A. C. Curtis, M.D., Ann Arbor, Mich.

The importance of the serum proteins, venous pressure and sodium intake on the production of edema will be discussed. This will be followed by a resume of therapy recommended for the treatment of nephritic and non-nephritic edema.

9:40 A. M. THE PART PLAYED BY ENDOCRINE DISTURBANCES IN
PEDIATRIC PRACTICE

Julian D. Boyd, M.D., Iowa City, Iowa

Endocrine anomaly in childhood is diagnosed more frequently than evidence would justify. Even in patients where endocrine deficiency unquestionably is present, it is as important to prescribe and supervise the management of the non-endocrine phases of the patient's abnormality as it is for the physician to administer endocrine preparations. The management of diabetes mellitus in children is discussed as an example of the need for unified treatment.

10:15 A. M. INTERMISSION

10:45 A. M. OCULAR SIGNS OF CERTAIN SYSTEMIC DISEASES

C. S. O'Brien, M.D., Iowa City, Iowa

Inspection of the eyes and the ocular movements and ophthalmoscopic examination of the eye grounds should always be a part of every examination, as such a careful study frequently provides a clue to or confirmation of the diagnosis. The ocular findings in intracranial diseases, diabetes, chronic nephritis, arteriosclerosis, the leukemias, the anemias, hyperthyroidism, and many others are discussed.

11:25 A. M. THE VALUE OF THE METABOLIC RATE DETERMINATIONS IN PRACTICE

William H. Olmsted, M.D., St. Louis, Mo.

This paper is an attempt to summarize what the general practitioner can expect to learn from doing basal metabolism determinations; and the selection of cases on which to do it. The paper will point out some important points in technique that experience has taught the author. A discussion will be made of the symptoms and findings on examination that call for a basal metabolic rate determination, finally the conditions of the use of the BMR in treatment and diagnosis will be discussed.

SECTION ON SURGERY

Surgery Room, Forum

Presiding: G. B. Morrison, M.D., Wichita, Kans.

9:00 A. M. PATHOLOGY OF THE CERVIX

Charles Edwin Galloway, M.D., Evanston, Ill.

An illustrated talk with kodachrome still pictures

9:40 A. M. INJURIES TO LARGE BLOOD VESSELS AND THEIR MANAGEMENT

R. W. McNealy, M.D., Chicago, Ill.

Treatment of vessel injuries must be immediate and decisive. Five considerations in the treatment of recent vascular injuries are discussed. These are: (1) The presence and severity of external hemorrhage. (2) The presence or absence of evident contamination or infection in the wound. (3) The condition of the circulation distal to the point of injury. (4) The care of concomitant injuries to tendons, nerves, and bones should usually be relegated as much as they safely can be to a later period. (5) Post-operative care is the fifth consideration.

10:15 A. M. INTERMISSION

10:45 A. M. THE ROLE OF SURGERY IN PAINFUL FEET

Earl W. McBride, M.D., Oklahoma City, Okla.

Surgical correction of painful deformities of the toes and other parts of the foot is not given enough serious attention. The more important subjects of surgical interest are those of bunions, hammer toes, soft corn, clawfoot, metatarsalgia, and spur growths. The original technique of the author for correcting hallux valgus and bunion deformity is described. Procedures considered preferable by orthopedists for the various other conditions are appraised.

11:25 A. M. DIFFERENTIAL DIAGNOSIS OF ABDOMINAL PAIN FROM A UROLOGICAL VIEWPOINT

T. Leon Howard, M.D., Denver, Colo.

The urologist is confronted each day with patients who have abdominal pain as a factor in their illness, and because of the similarity of this pain to that produced by intraperitoneal pathology, many of these patients have either been treated or operated without relief of their trouble. An attempt to clarify some of these mistakes is made in this paper.

ROUND TABLE LUNCHEONS

(12:15 P.M. to 1:30 P.M.)

MEDICINE—Lassen Hotel, Grill Room

Guests: Julian D. Boyd, M.D., Iowa City, Iowa
A. C. Curtis, M.D., Ann Arbor, Mich.

Presiding: F. L. Menehan, M.D., Wichita, Kans.

SURGERY—Allis Hotel, Aviation Room

Guests: Earl D. McBride, M.D., Oklahoma City, Okla.
Stuart W. Harrington, M.D., Rochester, Minn.

Presiding: Vern L. Pauley, M.D., Wichita, Kans.

OBSTETRICS AND GYNECOLOGY—Lassen Hotel, Aeronautics Room

Guest: Charles Edwin Galloway, M.D., Evanston, Ill.
Presiding: George E. Cowles, M.D., Wichita, Kans.

EYE, EAR, NOSE AND THROAT—Broadview Hotel, Blue Room

Guests: C. S. O'Brien, M.D., Iowa City, Iowa
Dean M. Lierle, M.D., Iowa City, Iowa

Presiding: George F. Gsell, M.D., Wichita, Kans.

SECRETARIES LUNCHEON—Broadview Hotel, Rose Room

Presiding: John M. Porter, M.D., Concordia, Kans.
Secretary The Kansas Medical Society

WEDNESDAY AFTERNOON, MAY 15

SECOND GENERAL SESSION

Arcadia Theater, Forum

Presiding: C. C. Nesselrode, M.D., Kansas City, Kans.

2:00 P. M. A COUNTY'S APPROACH TO MEDICAL ECONOMICS

Ray A. West, M.D., Wichita, Kans.
President, Sedgwick County Medical Society

2:10 P. M. THE STATE'S APPROACH TO MEDICAL ECONOMICS

C. C. Nesselrode, M.D., Kansas City, Kans.
President, The Kansas Medical Society

2:30 P. M. THE NATIONAL ASPECTS OF MEDICAL ECONOMICS

Alphonse M. Schwitalla, S.J., Ph.D., St. Louis, Mo.

3:20 P. M. INTERMISSION

3:50 P. M. THE TREATMENT OF CHRONIC INDIGESTION

Walter L. Palmer, M.D., Chicago

In the treatment of chronic abdominal distress the first essential is the establishment of a correct diagnosis. The history and physical examination are most important, but in the vast majority of cases the usual laboratory procedure and a thorough x-ray study should also be made. Peptic ulcer, cholelithiasis, chronic cholecystitis, chronic appendicitis, and organic diseases of the colon are briefly discussed. Especial consideration is given to the so-called "irritable colon" and other functional disturbances of the gastro-intestinal tract.

4:25 P. M. DIAGNOSIS AND SURGICAL TREATMENT OF CARCINOMA OF THE BREAST

Stuart W. Harrington, M.D., Rochester, Minn.

The most important considerations of carcinoma of the breast are the early clinical diagnosis and immediate radical surgical treatment. In this paper the results of the study of three, five, ten, fifteen, and twenty-year survival rates following radical mastectomy in a series of 5026 patients who have been traced three years or more after operation are given, as are the results of comparison of survival rates with and without axillary nodal metastasis at the time of operation, the survival rates according to the grades of the malignancy, and the results of comparison of survival rates of patients treated with and without post-operative irradiation.

- 7:00 P. M. ANNUAL BANQUET
Innes Tea Room
 Speaker: Mr. John Rogers, Tulsa, Okla.
- 10:00 P. M. DANCE
Innes Tea Room
 Matt Betton Orchestra

THURSDAY MORNING, MAY 16

REGISTRATION—North Entrance of Forum
 Open 8 A.M. to 6 P.M.

- 8:30 A. M. HOUSE OF DELEGATES
Allis Hotel, Ballroom

SECTION ON MEDICINE

Arcadia Theater, Forum

Presiding: E. H. Terrill, M.D., Wichita, Kans.

- 9:00 A. M. THERAPY IN PNEUMONIA
 Ralph H. Major, M.D., Kansas City, Mo.
- 9:40 A. M. CARDIAC ASTHMA AND PULMONARY EDEMA
 Soma Weiss, M.D., Boston, Mass.

The heart and lungs should be considered as a physiologic unit. Many of the symptoms that we attribute to diseases of the heart originate from the lungs as a result of engorgement and edema. The mechanism, clinical significance, and treatment of cardiac asthma and pulmonary edema will be discussed. The differentiation of the two conditions is considered.

- 10:15 A. M. INTERMISSION
- 10:45 A. M. THE PHYSICIAN'S RESPONSIBILITY IN INDUSTRIAL WORK
 Erskine Wyman, Topeka, Kans.
 Chairman Kansas Industrial Commission
- 11:25 A. M. THE STATE BOARD OF HEALTH AND THE PRIVATE PRACTITIONER
 F. P. Helm, M.D., Topeka, Kans.

SECTION ON SURGERY

Surgery Room, Forum

Presiding: James S. Hibbard, M.D., Wichita, Kans.

- 9:00 A. M. THE TREATMENT OF ACUTE INTESTINAL OBSTRUCTION
 Thomas G. Orr, M.D., Kansas City, Mo.
- 9:40 A. M. SPINAL ANESTHESIA IN GENERAL SURGERY—REPORT OF 400 CASES
 Orville R. Clark, M.D., Topeka, Kans.
 Discussion: C. D. Snyder, M.D., Winfield, Kans.
- 10:15 A. M. INTERMISSION
- 10:45 A. M. EVALUATION OF DISABILITY
 Earl D. McBride, M.D., Oklahoma City, Okla.

Uniformity of reasoning in disability percentages is desirable. The author has advocated a method of evaluating disability which contributes toward systematic analysis and authentic conclusions. Ability to work or function is divided into seven factors: quickness of action, co-ordination, security, strength, endurance, personal risk, and prestige of physique. Each of these factors is given a relative percentage value of 100 per cent normal. An estimate of the percentage of loss in the various factors when totaled renders the percentage of disability.

11:25 A. M. MANAGEMENT OF THE PERFORATED APPENDIX

E. Raymond Gelvin, M.D., Concordia, Kans.

Discussion: F. R. Croson, M.D., Clay Center, Kans.

ROUND TABLE LUNCHEONS

(12:15 P.M. to 1:30 P.M.)

MEDICINE—Lassen Hotel, Grill Room

Guests: Soma Weiss, M.D., Boston, Mass.

A. C. Curtis, M.D., Ann Arbor, Mich.

Presiding: Harold W. Palmer, M.D., Wichita, Kans.

SURGERY—Allis Hotel, Aviation Room

Guests: T. Leon Howard, M.D., Denver, Colo.

Thomas G. Orr, M.D., Kansas City, Mo.

Presiding: James W. Shaw, M.D., Wichita, Kans.

THURSDAY AFTERNOON, MAY 16

THIRD GENERAL SESSION

Arcadia Theater, Forum

Presiding: E. S. Edgerton, M.D., Wichita, Kans.

2:00 P. M. THE MANAGEMENT OF THE PATIENTS WITH
ARTERIAL HYPERTENSION

Soma Weiss, M.D., Boston, Mass.

A presentation of a classification of hypertension bearing on treatment is given. A general consideration of the management and training of hypertensive patients, as well as of the complications of the disease, is given. A critical analysis of drug therapy and of surgical measures is made.

2:40 P. M. NORMAL NUTRITION IN INFANCY AND CHILDHOOD

Julian D. Boyd, M.D., Iowa City, Iowa.

The status of nutrition of the average child is contrasted with that which modern nutritional standards would call for, to point out the prevalence of poor nutritional practices. The relation between subnutrition and various abnormalities is discussed. Requisites for normal nutrition are enumerated. The value of pharmaceutical preparations of vitamins and minerals is reviewed. The nutritional needs of the infant differ quantitatively rather than qualitatively from those of the older child. The constituents of a suitable diet for the infant and for children of various ages are described.

3:15 P. M. INTERMISSION

3:45 P. M. THE DIAGNOSIS OF COMMON URINARY TRACT
LESIONS

T. Leon Howard, M.D., Denver, Colo.

If a proper history is taken and followed by a common sense interpretation of the symptoms, many of these lesions ought to be at least suspected and in the majority of cases a definite conclusion should be reached by the family physician. Thus the diagnostician will be in a position to refer his patients earlier for urological care.

4:25 P. M. MODERN CHEMOTHERAPY IN ACUTE INFECTIONS

Arthur C. Curtis, M.D., Ann Arbor, Mich.

A discussion of the mode of action, dosage, indications for use, methods of administration and toxic manifestations of neoprontosil, sulfanilamide, sulfapyridine, sulfathiazole and sulfamethylthiazole.

EYE, EAR, NOSE AND THROAT SECTION

TUESDAY, MAY 14

REGISTRATION—North Entrance of Forum—Open 8:00 A.M. to 6:00 P.M.

All meetings of the section will be in the Eye, Ear, Nose and Throat Section room to south of Rose Room.

9:00 A. M. STAPHYLOCOCCIC CONJUNCTIVITIS

C. S. O'Brien, M.D., Iowa City, Iowa

Conjunctivitis due to infection with hemolytic staphylococcus is the most common type of conjunctivitis in midwestern states. The disease is usually chronic and characteristically shows frequent sub-acute or acute exacerbations. The disease and its treatment are thoroughly discussed.

10:20 A. M. INTERMISSION

11:30 A. M. THE VALUE OF DIAGNOSTIC BRONCHOSCOPY AND ESOPHAGOSCOPY IN GENERAL PRACTICE

Dean M. Lierle, M.D., Iowa City, Iowa

General Session—Arcadia Theater

12:15 P. M. ROUND TABLE LUNCHEON

Broadview Hotel, Blue Room

Guests: C. S. O'Brien, M.D., Iowa City, Iowa

Dean M. Lierle, M.D., Iowa City, Iowa

Presiding: Ernest M. Seydell, M.D., Wichita, Kans.

2:00 P. M. GLAUCOMA SIMPLEX

C. S. O'Brien, M.D., Iowa City, Iowa

3:30 P. M. INTERMISSION

3:50 P. M. ORAL LESIONS (Illustrated with colored slides)

Dean M. Lierle, M.D., Iowa City, Iowa.

WEDNESDAY, MAY 15

REGISTRATION—North Entrance of Forum—Open 8:00 A.M. to 6:00 P.M.

9:00 A. M. TREATMENT OF ACUTE AND CHRONIC SINUSITIS

Dean M. Lierle, M.D., Iowa City, Iowa

10:15 A. M. INTERMISSION

10:45 A. M. OCULAR SIGNS OF CERTAIN SYSTEMIC DISEASES

C. S. O'Brien, M.D., Iowa City, Iowa

SECTION ON MEDICINE—Arcadia Theater

12:15 P. M. ROUND TABLE LUNCHEON

Broadview Hotel, Blue Room

Guests: Dean M. Lierle, M.D., Iowa City, Iowa

C. S. O'Brien, M.D., Iowa City, Iowa

Presiding: George F. Gsell, M.D., Wichita, Kans.

2:00 P. M. CAUSES OF VERTIGO WITH SPECIAL REFERENCE TO TREATMENT OF MENIERE'S SYNDROME COMPLEX

Dean M. Lierle, M.D., Iowa City, Iowa

3:20 P. M. INTERMISSION

3:50 P. M. CATARACT SURGERY

C. S. O'Brien, M.D., Iowa City, Iowa

ROUND TABLE LUNCHEONS

Round table luncheons this year will depart somewhat from the usual form. There will be no particular topic presented. The speaker may be asked any question within his field—questions need not be confined to papers presented by the guest speakers. The round table luncheons will be held on Tuesday, Wednesday and Thursday at 12:15 to 1:30 at the places listed below.

TUESDAY

MEDICINE—Lassen Hotel, Colonial Room

Guests: William H. Olmsted, M.D., St. Louis, Mo.
Walter L. Palmer, M.D., Chicago, Ill.

Presiding: George E. Milbank, M.D., Wichita, Kans.

SURGERY—Allis Hotel, Ballroom

Guests: R. W. McNealy, M.D., Chicago, Ill.
Stuart W. Harrington, M.D., Rochester, Minn.

Presiding: Wayne C. Bartlett, M.D., Wichita, Kans.

OBSTETRICS AND GYNECOLOGY—Lassen Hotel, Aeronautics Room

Guest: Charles Edwin Galloway, M.D., Evanston, Ill.

Presiding: Howard C. Clark, M.D., Wichita, Kans.

EYE, EAR, NOSE AND THROAT—Broadview Hotel, Blue Room

Guests: C. S. O'Brien, M.D., Iowa City, Iowa
Dean M. Lierle, M.D., Iowa City, Iowa

Presiding: E. M. Seydell, M.D., Wichita, Kans.

WEDNESDAY

MEDICINE—Lassen Hotel, Grill Room

Guests: Julian D. Boyd, M.D., Iowa City, Iowa
A. C. Curtis, M.D., Ann Arbor, Mich.

Presiding: F. L. Menahan, M.D., Wichita, Kans.

SURGERY—Allis Hotel, Aviation Room

Guests: Earl D. McBride, M.D., Oklahoma City, Okla.
Stuart W. Harrington, M.D., Rochester, Minn.

Presiding: Vern L. Pauley, M.D., Wichita, Kans.

OBSTETRICS AND GYNECOLOGY—Lassen Hotel, Aeronautics Room

Guest: Charles Edwin Galloway, M.D., Evanston, Ill.

Presiding: George E. Cowles, M.D., Wichita, Kans.

EYE, EAR, NOSE AND THROAT—Broadview Hotel, Blue Room

Guests: C. S. O'Brien, M.D., Iowa City, Iowa
Dean M. Lierle, M.D., Iowa City, Iowa

Presiding: George F. Gsell, M.D., Wichita, Kans.

SECRETARIES LUNCHEON—Broadview Hotel, Rose Room

Presiding: John M. Porter, M.D., Concordia, Kans.
Secretary The Kansas Medical Society

THURSDAY

MEDICINE—Lassen Hotel, Grill Room

Guests: Soma Weiss, M.D., Boston, Mass.
A. C. Curtis, M.D., Ann Arbor, Mich.

Presiding: Harold W. Palmer, M.D., Wichita, Kans.

SURGERY—Allis Hotel, Aviation Room

Guests: T. Leon Howard, M.D., Denver, Colo.
Thomas G. Orr, M.D., Kansas City, Mo.

Presiding: James W. Shaw, M.D., Wichita, Kans.

STAG BANQUET

Between the dark and the daylight, when the sun begins to lower, comes a pause in the day's divertimento known as the sportsmen's hour, and also known under the pseudonym of the Stag Banquet. You will find this event beginning along about 6:30 p.m. at the Wichita Country Club. The day's plunder will be divided among those shooters and golfers who displayed their prowess most formidably on links and range. Entertainment will be of a potpourri nature and may be taken with a grain of aspirin if desired. The closing hour has not been established as the committee could not agree whether or not to institute daylight savings time. They did however accede it may go on 'till yawn.

ALUMNI BANQUET

Atop the spacious roof garden of the Broadview Hotel, medicoes will gather at 6:00 o'clock Tuesday evening, May 14, to begin the Annual Alumni Roundup. The assemblage will comprise graduates from medical schools both far and near, who will sit where they please regardless of specialty, locality or alma mater. Served in a pleasing and palatable form will be a production, which for want of better name will be called a musical comedy with the appalling title of "Stymied," "Behind the Eight Ball," "The Lone Stranger," or a reasonable facsimile thereof. It is an entirely original production behind which lie, in the prone position, many hours of work, rehearsals and production problems. If our word is as good as a Government bond we will firmly here and now state *you won't want to miss it*. The tariff is only \$1.25—meal included. Tickets may be secured at the Registration Desk.

ANNUAL BANQUET AND DANCE

Mr. John Rogers, prominent attorney of Tulsa, will be the speaker at the annual banquet for members and their wives. Mr. Rogers, appearing through the courtesy of the National Association of Manufacturers, is a past president of the Tulsa Chamber of Commerce. The banquet, which will be held at the Innes Tea Room at 7:00 P.M. Wednesday will be followed by a dance. Matt Betton and his orchestra of Manhattan have been engaged for this event. Tickets for this annual affair may be secured at the Registration Desk.

REGISTRATION

The constitution and by-laws of the Society provide that every physician must register before he shall be entitled to attend any of the events of the meeting. The only requirement for registration is the presentation of a 1940 Society membership card. Registration by any other means requires certification by the secretary of the county medical society of place of residence, or by an officer of the society.

The registration headquarters will be located at the entrance of the Wichita Forum and will be open from 8:00 A.M. to 6:00 P.M. each day. Tickets for the alumni banquet, the annual banquet, and the round table luncheons may be obtained at the registration desk.

INFORMATION DESK

Information desks will be established at all hotels to assist members in all ways possible.

HOUSE OF DELEGATES

The meetings of the house of delegates will be held in the Ball Room of the Hotel Allis as follows: A special session at 1:00 P.M. on Tuesday, May 14, the first regular session at 9:00 P.M. on Tuesday, May 14, and the second regular session at 8:30 A.M. on Thursday, May 16. The special session will be limited to discussion of a special order of business. The first regular session will be devoted to consideration of resolutions and the reports of officers, councilors and committees. The second regular session will include the annual election of officers and the completion of unfinished business.

A reference committee plan will be utilized this year which it is believed will save considerable time in the handling of the proceedings of the house of delegates. A Reference Committee on Reports of Officers and Councilors and one on Committee Reports will be appointed; these will receive and consider resolutions and the reports of officers, councilors and committees in advance of the first meeting of the house of delegates; and the reference committees will then present recommendations to the house of delegates concerning the adoption of reports and resolutions. Likewise resolutions and new business introduced at the first regular meeting of the house of delegates may be referred to these committees for presentation of recommendations at the second meeting. The Reference Committee on Reports of Officers and Councilors will meet at 10 A.M. on Tuesday, May 14, at the Aviation Room in the Hotel Allis. The Refer-

A special meeting of the house of delegates will be held at the Ball Room of the Hotel Allis on Tuesday, May 14, commencing at 1:00 P.M. An important special order of business will be discussed. The Council of the Society requests the attendance of all delegates at this session.

Members and county medical societies are asked to prepare resolutions on all matters they desire to present to the house of delegates. Resolutions of this kind should be presented to the Reference Committee on Committee Reports and Resolutions in advance of the first meeting of the house of delegates.

ence Committee on Committee Reports and Resolutions will hold its first meeting at the Ingalls Room of the Hotel Allis at 10 A.M. on Tuesday, May 14, and its second meeting at 2:00 P.M. on Wednesday, May 15, at the same place.

A reserved section will be provided at the house of delegates meeting place for the seating of delegates. Delegates will be registered at the entrance of the Ball Room of the Hotel Allis immediately preceding each session and will be provided with badges which will entitle them to sit in the reserved section. It is thought that this arrangement will eliminate the necessity for roll call, and that it will assist in the handling of voting. Delegates are requested to present letters of authority or other certifications from their county medical societies.

The constitution and by-laws provides that each county medical society shall be entitled to send to the house of delegates each year, one duly qualified delegate for every twenty members, and one duly qualified delegate for each major fraction thereof; provided that each component society has made its annual report and paid its assessments as provided in the constitution and by-laws shall be entitled to at least one duly qualified delegate. In the event that a delegate finds it impossible to attend, the by-laws provide that he shall appoint an alternate to attend and serve in his place and that each such alternate shall qualify himself to the Committee on Credentials.

Many matters of extreme importance are scheduled upon the agenda for this year's meetings, and every county medical society is urged to have its delegates or alternates present at both of the meetings.

All members of the Society are invited to attend the meetings of the house of delegates.

SCIENTIFIC EXHIBITS

FORTY-TWO Scientific Exhibits have been assembled for the Eighty-first Annual Session.

Seen this year, will be a new section known as animated exhibits. These demonstration exhibits will be conducted during intermission periods each day. Scientific exhibits will be seen in the Rose Room of the Forum and will be open from 8:00 A.M. to 6:00 P.M. daily.

ANIMATED EXHIBITS

HEART CLINIC: By means of amplified sound, various heart conditions will be demonstrated. Presenting this exhibit will be Earl Mills, M.D., Wichita; Phil Morgan, M.D., Emporia, and C. W. Erickson, M.D., Pittsburg.

GASTRO-INTESTINAL INTUBATION: Demonstrations of intubation will be presented by L. F. Barney, M.D., Kansas City, Kans.; Wayne Bartlett, M.D., Kansas City, Kans., and James B. Fisher, M.D., Wichita, on Thursday.

FRACTURES: A demonstration devoted to Colles and Potts fractures presented by Howard Snyder, M.D., Winfield; C. K. Wier, M.D., Wichita, and E. D. Ebright, M.D., Wichita.

OBSTETRICS: Tuesday, demonstration of use of Keeland forceps by Ray A. West, M.D., Wichita; Wednesday, demonstration of version and breech presentation by Porter Brown, M.D., Salina, and Thursday, indications for forceps delivery by Harry Davis, M.D., Topeka.

BURNS: Tuesday, systemic reaction, shock and their treatment, Maurice Walker, M.D., Kansas City, Mo.; Wednesday, local treatment, Hervey R. Hodson, M.D., Wichita; Thursday, reconstruction, A. E. Hiebert, M.D., Wichita.

PATHOLOGY: Tuesday, demonstration of gross pathological diagnosis of breast tumors, C. A. Hellwig, M.D., Wichita; pathological clinics, J. L. Lattimore, M.D., Topeka, and L. C. Murphy, M.D., Wichita, Wednesday and Thursday respectively.

STATIONARY EXHIBITS

Surgical Epilepsy—Ralph M. Stuck, M.D., Denver, Colorado.

Surgery in Tuberculosis of the Chest—W. W. Buckingham, M.D., Kansas City, Missouri.

Diabetic Complications—Eldon S. Miller, M.D., Kansas City, Kansas.

Brucellosis (Undulant Fever)—Fred Angle, M.D., Kansas City, Kansas.

Immediate Repair of Tendons—R. E. Speirs, M.D., Dodge City, Kansas.

Demonstration of Interesting Cases—Thomas L. Foster, M.D., Larned State Hospital, Larned, Kansas.

Ambulatory Management of Fractures of Lower Extremity—Howard E. Snyder, M.D., Winfield, Kansas.

Skin Cancer—Marion Trueheart, M.D., Sterling, Kansas.

X-Ray Interpretation of Gastric Lesions—L. R. McGill, M.D., Hoisington, Kansas.

X-Ray Demonstration of Chest Diseases—R. M. Brian, M.D., El Dorado, Kansas.

Exhibit Demonstrating Use of Sulfapyridine and Sulfanilaamide—G. E. Kassebaum, M.D., El Dorado, Kansas.

Cervical Pathology—C. E. Galloway, M.D., Evanston, Illinois.

State Heart Exhibit—Earl Mills, M.D., Wichita, Kansas.

Exhibit from Kansas State Board of Health—F. P. Helm, M.D., Topeka, Kansas.

Tuberculosis Control as a County Society Project—Marion County Medical Society, Marion, Kansas.

Diagnosis and Treatment of Cancer (Motion Picture)—Kansas Medical Society Cancer Committee.

Pathological Specimens of Knee Cartilages—Charles Rombold, M.D., H. O. Anderson, M.D., Wichita, Kansas.

- Cerebral Tumors—R. L. Drake, M.D., James S. Hibbard, M.D., Wichita, Kansas.
 The Colloid Goiter—C. A. Hellwig, M.D., Wichita, Kansas.
 Fractures of the Metacarpals and Phalanges—C. K. Wier, M.D., Wichita, Kansas.
 Pulmonary Tuberculosis—A. L. Ashmore, M.D., Wichita, Kansas.
 Post Partum Sterilization—E. L. Cooper, M.D., Wichita, Kansas.
 Vaginal Flora Studies of Normal and Abnormal Menstrual Cycles—R. A. West, M.D., Robert Maxwell, M.D., Wichita, Kansas.
 Surgical Treatment of Pulmonary Embolism—W. J. Kiser, M.D., Wichita, Kansas.
 X-Ray Treatment of Carcinoma of the Esophagus—N. C. Nash, M.D., Wichita, Kansas.
 Sarcoma of the Femur (Case Demonstration)—E. J. Frost, M.D., Wichita, Kansas.
 Micro Photographs of Lesions of Kidney and Prostrate—E. A. Pickens, M.D., Wichita, Kansas.
 Kidney Pathology—Vern L. Pauley, M.D., Wichita, Kansas.
 Surgical Treatment of Ulcerating Lesions of the Stomach—James S. Hibbard, M.D., Wichita, Kansas.
 Calibrated Intermediate Skin Grafts—Earl C. Padgett, M.D., University of Kansas School of Medicine, Kansas City, Kansas.
 Lesions of the Esophagus—C. H. Warfield, M.D., Wichita, Kansas.
 Molds and Inhalant Allergy—O. R. Withers, M.D., Kansas City, Missouri.
 Reconstruction Surgery—A. E. Hiebert, M.D., Wichita, Kansas.
 Functional Tests and Cardiac Reserve with Clinical Applications of Lag Screen Electrocardiograph—Graham Asher, M.D. and Mahlon Delp, M.D., University of Kansas School of Medicine, Kansas City, Kansas.
 Experimental Myocardial Ischemia—Joseph Lalich, M.D., University of Kansas School of Medicine, Kansas City, Kansas.
 Recording Type Lag Screen Cathode Ray Electro-cardiograph—G. A. Walker, M.D., University of Kansas School of Medicine, Kansas City, Kansas.
 Medical Care—A. C. Eitzen, M.D., Hillsboro, Kansas.

SCIENTIFIC MOVIES

Following is a list of scientific motion pictures which will be shown in the movie booth in the scientific exhibits section. An operator will be on hand to show the films whenever you request it. The pictures were supplied through the courtesy of Mead Johnson & Company and Davis and Geck, Inc.

1. Modern Surgical Treatment of Varicose Veins and Ulcers.
(20 Minutes)
2. Hemorrhoids and a Method in Hemorrhoidectomy.
(15 Minutes)
3. Traumatic Surgery of the Extremities.
(55 Minutes)
4. Depressed Fracture of Skull.
(15 Minutes)
5. Appendectomy (Inversion, Non-Ligation Technic).
(15 Minutes)
6. Latzko Extraperitoneal Cesarean Section.
(15 Minutes)
7. Restoration of Function in Cases of Harelip and Cleft Palate.
(13 Minutes)
8. Breech Presentation with Manual Aid.
(16 Minutes)
9. Left Mediolateral Episiotomy and Repair.
(8 Minutes)
10. The Physiology of Fertilization in the Human Female.
(26 Minutes)
11. Differential Diagnosis of Vomiting in the New Born.
(32 Minutes)

TECHNICAL EXHIBITS

As all members know, no greater contribution is made to a state medical meeting that that furnished by the technical exhibitors. The financial assistance provided by the exhibitors in their purchase of exhibit space makes it possible to provide a type of meeting which would otherwise be difficult or impossible, and the display of new equipment and new products also affords an important scientific contribution. In return for this assistance, the exhibitors appreciate an opportunity to explain the services their companies are able to offer. Kansas has been fortunate in the number of exhibitors that it is able to obtain. It would like very much to have every exhibitor feel that he is fully paid for the considerable expense his exhibit represents. Members can, therefore, assist in fulfilling an obligation and in making possible even bigger and better Kansas meetings—by visiting and registering at each exhibit.

Exhibitors

1. J. B. Lippincott Company, Philadelphia.
2. Coca-Cola Company, Atlanta, Ga.
3. Lederle Laboratories, Inc., New York.
4. DePuy Manufacturing Co., Warsaw, Ind.
5. Riggs Optical Company, Kansas City, Mo.
6. Davis & Geck, Inc., Brooklyn, New York.
7. Harrower Laboratory, Inc., Glendale, Calif.
8. Goetze Niemer Company, St. Joseph, Mo.
9. Petrolagar Laboratories, Inc., Chicago.
12. W. E. Isle Company, Kansas City, Mo.
13. Philip Morris & Company, Ltd., New York.
14. M & R Dietetic Laboratories, Inc., Columbus, Ohio.
15. E. R. Squibb & Sons, New York.
16. H. J. Heinz Company, Pittsburg, Pa.
17. Doho Chemical Corporation, New York.
18. Westinghouse X-Ray Co. Inc., Long Island, N. Y.
19. & 20. Burroughs Wellcome & Co. Inc., New York.
21. Eli Lilly & Company, Indianapolis, Ind.
22. Becton, Dickinson & Co., Rutherford, N. J.
23. Cerophyl Laboratories, Kansas City, Mo.
24. C. B. Fleet Company, Inc., Lynchburg, Va.
25. Cole Chemical Company, St. Louis, Mo.
26. Masemore Adjustment Company, Wichita, Kan.
27. Sharpe & Dohme, Inc., Philadelphia, Pa.
28. Denver Chemical Manufacturing Co., New York.
29. De Vilbiss Company.
30. Parke, Davis & Company, Detroit, Mich.
31. & 32. General Electric X-Ray Corp., Chicago.
33. Mead Johnson & Company, Evansville, Ind.
34. American Hospital Supply Corp., Chicago.
35. Holland-Rantos Company, Inc., New York.
36. Gerber Products Company, Fremont, Mich.
37. Medical Protective Company, Wheaton, Ill.
38. & 39. Mid-West Surgical Supply Co., Wichita.
40. & 41. A. S. Aloe Company, St. Louis, Mo.
42. George A. Breon & Company, Kansas City, Mo.
43. American Optical Company, Kansas City, Mo.
44. John Wyeth & Brothers, Inc., Philadelphia, Pa.
45. H. G. Fischer & Company, Chicago, Ill.
47. Zemmer Company, Pittsburgh, Pa.
48. Schering Corp., Bloomfield, N. J.
50. Steffen Ice Cream Co., Wichita, Kans.
52. Gerry Optical Company, Kansas City, Mo.

Booth 1

J. B. LIPPINCOTT COMPANY
Philadelphia, Pennsylvania

"Among the interesting Lippincott Publications on display will be Kugelmass': 'Newer Nutrition in Pediatric Practice' and Becker and Obermayer's: 'Modern Dermatology and Syphilology'. Of similar importance is 'Func-

tional Disorders of the Foot' by Dickson and Dively which has gone into a second printing within five months of publication. Other interesting works include Thorek's: 'Modern Surgical Technic', Rigler's: 'Outline of Roentgen Diagnosis', Barborka's: 'Treatment by Diet' and many others."

* * *

Booth 2

THE COCA-COLA COMPANY
Atlanta, Georgia

"Coca-Cola will be served to the delegates with the compliments of The Coca-Cola Company."

* * *

Booth 3

LEDERLE LABORATORIES, INC.
New York, New York

"Lederle Laboratories, Inc., are with us again, where their representatives, Messrs. Lee and Moss will be glad to answer such questions as you may have relative to Antitoxins, Anemias, Sulfapyridine, Pneumonia Sera, Bellabulgar (for Post Encephalitis or Parkinsonism) Allergic Extracts, Pollens, Vitamins, particularly Vitamin B Complex, Thiamin Chloride, etc. Samples of various products will be available."

* * *

Booth 4

DE PUY MANUFACTURING COMPANY
Warsaw, Indiana

"DePuy will exhibit in Booth 4, Smith-Petersen Nails, Carrell-Girard Screws, Mallets, Extractors, Impactors, Drivers, the Littig Guide where a Solid Smith-Petersen Nail may be inserted with accuracy without the use of the cannulated guide wire, simple Splints, Reducing Frame for Double Fractures of the Lower Leg and many other new items of interest to Surgeons and Doctors doing General Surgery will be on display. You are welcome to our booth at your Kansas State meeting. Mr. Howard Blosser will be in charge and is amply able to explain anything to you and answer your questions."

* * *

Booth 5

RIGGS OPTICAL COMPANY
Kansas City, Missouri

"The Riggs Optical Company, distributors of Bausch and Lomb Ophthalmic products, will have a display of interest to every physician. Instruments for both general practitioners and specialists will be ably demonstrated by attending representatives. Displayed here will be a complete line of frames, mountings and lenses headlined by Bausch and Lomb Loxit Numont Fulvue mountings. Also featured will be a complete line of Ray Ban Goggles and shooting glasses. Ask for demonstration."

Booth 6

DAVIS & GECK, INC.
Brooklyn, New York

"Davis & Geck, Inc., who for over a quarter century have specialized in the manufacture of heat sterilized sutures, will have their complete line of products on display, including a wide variety of sutures with swaged on Atraumatic needles especially designed for specific types of work such as intestinal, thyroid, plastic, eye, etc. Representatives from the laboratories will be in attendance at the booth and copies of the "Manual of Surgical Sutures and Ligatures" and other interesting booklets will be available."

* * *

Booth 8

GOETZE-NIEMER
St. Joseph, Missouri

"The affairs of the Goetze Niemer Company of St. Joseph and Kansas City, are still being personally directed by Doctor W. F. Goetze, member of the American Medical Association."

"He has been personally at the helm for fifty years, directing it's policy of handling only articles bearing the trade-marks of manufacturers' with National reputation and spotless integrity, and therefore, only medical supplies and equipment of that type will be on exhibition at their exhibit."

* * *

Booth 9

PETROLAGAR LABORATORIES, INC.
Chicago, Illinois

"Representatives in attendance at Booth 9 have an interesting story to tell of the numerous uses of Petrolagar for the treatment of constipation. Samples and literature pertaining to the Five Types of Petrolagar will be available at the booth, or, if physicians prefer, will be mailed on request."

"Doctors who are concerned with motion picture showings for staff meetings or classroom work, will be especially interested to learn that several new films, approved by the American College of Surgeons, have been added to the Petrolagar library and are now available for bookings before recognized medical groups."

Booth 12

THE W. E. ISLE COMPANY
Kansas City, Missouri

"The W. E. Isle Company of Kansas City, Missouri will feature: Isle Artificial Limbs, awarded the seal of approval by the American College of Surgeons; a complete line of modern orthopaedic appliances, outstanding for excellent design and finished workmanship; Camp Anatomical Supports for men and women; Elastic hosiery, including seamless, hand loomed, and two-way stretch Lastex for comparison."

* * *

Booth 13

PHILIP MORRIS & COMPANY, LTD.
New York, New York

"Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking."

* * *

Booth 14

M & R DIETETIC LABORATORIES, INC.
Columbus, Ohio

"M & R Dietetic Laboratories, Inc., Columbus, Ohio, in

Booth 14 will display Smilac and powdered SofKurd. Representatives will be glad to discuss the merits and suggested application of these products."

* * *

Booth 15

E. R. SQUIBB & SONS
New York, New York

"Physicians attending The Kansas Medical Society Convention are cordially invited to visit the Squibb Exhibit in Booth 15. The complete line of Squibb Vitamin, Glandular, Arsenical and Biological Products and Specialties, as well as a number of interesting new items will be featured."

"Well informed Squibb Representatives will be on hand to welcome you and to furnish any information desired on the products displayed."

* * *

Booth 16

H. J. HEINZ COMPANY
Pittsburgh, Pennsylvania

"Physicians interesting in prescribing for the feeding- especially of infants, older children, of adults requiring soft diets will be interested in the new Heinz exhibit where Strained and Junior Foods are attractively displayed. Mr. J. S. Hill is in attendance and will be happy to supply information on these foods."

"The eighth edition of the popular Heinz Nutritional Charts, containing greatly expanded charts and new data on vitamin content of food, is ready and will be mailed on request."

* * *

Booth 17

DOHO CHEMICAL CORPORATION
New York, New York

"The Auralgan Exhibit consists of a model of the human auricle four feet high together with a series of twenty-four three dimensional ear drums, modeled under the supervision if outstanding otologists. Each of these drums depict a different pathologic condition based upon actual case observation and prepared, in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians."

"As the observer looks into the large ear through a proportionately sized speculum, the ear drums appear successively within the canal so as to simulate actual conditions seen in life. The successive changes of the ear drums are affected by automatic mechanism, and accompanied by a brief description of the condition."

"This is the first time that such a complete modeling of ear drums has ever been executed in this scale."

* * *

Booth 18

WESTINGHOUSE X-RAY COMPANY, INC.
Long Island City, New York

"Westinghouse X-Ray Company will exhibit for the first time in the middle west the new Simplex Unit."

"This unit is the latest development in high-powered shockproof diagnostic equipment for both vertical and horizontal fluoroscopic and radiographic work. It is economical in its space requirements and economical in use."

* * *

Booth 21

ELI LILLY AND COMPANY
Indianapolis, Indiana

"Eli Lilly and Company produced the first commercial preparation of Insulin, contributed to development of liver therapy, and has been responsible for many other therapeutic advancements."

"Information concerning all Lilly products will be avail-

able at the Lilly exhibit where 'Merthiolate' (Sodium Ethyl Mercuri Thiosalicylate, Lilly), 'Sodium Amytal' (Sodium Iso-amyl Ethyl Barbiturate, Lilly) and other important products will be featured."

* * *

Booth 22

BECTON, DICKINSON & COMPANY

Rutherford, New Jersey

"In Booth No. 22, Becton, Dickinson will display their line of syringes, needles, thermometers, blood pressure apparatus and Ace Bandages featuring the new Ace Elastic Adhesive Bandage. There will be available a booklet containing a synopsis of the various uses to which the Elastic Adhesive Bandage is being successfully applied, and samples of the material will be given to any who ask for them. The exhibit will be in charge of our representative, Mr. James Dent."

* * *

Booth 23

CEROPHYL LABORATORIES

Kansas City, Missouri

"A cordial invitation to visit their Booth 23 is extended by Cerophyl Laboratories (a division of American Dairies, Inc.). Here you will find on display the new development, Cerophyl, a natural and rich source of Vitamin A, B Complex, C, the grass juice factor, and the highly publicized Vitamin K. Representatives will be on hand to discuss Cerophyl, a vitamin supplement which has been accepted by the Council on Foods of the A. M. A."

* * *

Booth 24

C. B. FLEET COMPANY, INC.

Lynchburg, Virginia

"Phospho-Soda (Fleet) is a chemically buffered saline laxative made by combining Sodium Biphosphate with alkaline Sodium Phosphate. The combination of these two valuable U. S. P. drugs in a stable solution has been employed by the C. B. Fleet Company for more than fifty years."

"Phospho-Soda (Fleet) when taken in quantity produces a rapid, non-irritating laxative action, especially stimulating the small intestine, draining the gall bladder and ducts, and in addition giving a buffer action that assists the body to restore its normal function of elimination."

* * *

Booth 26

MASEMORE ADJUSTMENT COMPANY

Wichita, Kansas

"DOCTORS: DOES IT PAY to place those delinquent accounts with an agency for collection? Thelma Ray Osborne and Lena Schmidt of the Masemore Adjustment Company in Wichita invite you to visit Booth 26. See our set-up for turning unpaid bills into dollars and learn why IT'S A FACT THAT—COLLECTION SERVICE IS PROTECTION SERVICE."

* * *

Booth 27

SHARP & DOHME, INC.

Philadelphia, Pennsylvania

"Sharp & Dohme will have their new modern display at Booth 27 this year, featuring Propadrine Hydrochloride Products, 'Lyovac' Bee Venom Solution, and other 'Lyovac' Biologicals. There will also be on display a group of new pharmaceutical specialties and biologicals prepared by this house, such as Rabellon, Daldrin, Padrophyl, Elixir Propadrine Hydrochloride, Riona, Depropanex, and Ribothiron. Capable, well-informed representatives will be on hand to

welcome physicians and furnish information on Sharp & Dohme products."

* * *

Booth 28

THE DENVER CHEMICAL MANUFACTURING CO.

New York, New York

"Antiphlogistine, which is employed by practitioners in all parts of the world in the treatment of inflammatory and congestive conditions. Also Galatest, the new micro-reagent for the instantaneous detection of urine sugar. See the demonstration of Galatest, a product which has made a profound impression wherever it has been introduced."

* * *

Booth 29

THE DEVILBISS COMPANY

Toledo, Ohio

"The DeVilbiss Company has reserved Space No. 29 for the 1940 convention of The Kansas Medical Society, to be held May 13 to 16 inclusive, at the Wichita Forum, Wichita, Kansas."

"The complete DeVilbiss line of medical atomizers will be on display. Specially featured in the exhibit will be illustrations showing the superiority coverage afforded by the atomizer in the application of solutions to the nose and throat. These illustrations are based on x-ray research."

"Copies of the illustrations for reference may be secured from I. W. Smock, DeVilbiss representative in charge of the display."

* * *

Booth 30

PARKE, DAVIS & COMPANY

Detroit, Michigan

"Featured in the Parke-Davis Exhibit will be the Sex Hormones, Theelin and Theolol; Antisiphilitic agents, such as Mapharsen and Thio-Bismol; Posterior Lobe Preparations, including Pituitrin, Pitocin and Pitressin; and various Adrenalin Chloride preparations."

* * *

Booths 31 & 32

GENERAL ELECTRIC X-RAY CORPORATION

Chicago, Illinois

"Mr. R. A. Wells and members of his Kansas City organization take this opportunity to greet you and urge you to visit our exhibit in Booths 31 & 32. Here you will learn about 'what's new' in electromedical and x-ray apparatus and you will see part of our extensive line of supplies and accessories, which we believe is the largest in the world."

* * *

Booth 33

MEAD JOHNSON & COMPANY

Evansville, Indiana

"Mead Johnson & Company at Booth 33 will exhibit several new products in addition to Dextri-Maltose, Pabulum and Oleum Percomorphum. They will also have on display various examples of the slogan 'Servamus Fidem'—We Are Keeping the Faith."

* * *

Booth 34

AMERICAN HOSPITAL SUPPLY CORPORATION

Chicago, Illinois

"If you're planning to visit The Kansas Medical Society Convention be sure to save plenty of time to see what's waiting for you at Booth 34. The American Hospital Supply Corporation is showing an unusually interesting array of brand new specialties in surgical and hospital equip-

ment. You're sure to come away with some new ideas about blood transfusion, blood banking, intravenous solutions, oxygen therapy, treatment of vascular diseases, and many other important phases of your work. Mr. Tom G. Murchison and Mr. L. Mel Roberts will be glad to see you and show you around. Remember you have an appointment at Booth 34."

* * *

Booth 35

HOLLAND-RANTOS COMPANY, INC.

New York, New York

"A motion picture demonstration of Modern Contraceptive Technique will be the feature at the Holland-Rantos Booth together with a display of their products, the Koromex diaphragm and jelly and their newer items, the H-R Emulsion jelly and the Koromex diaphragm introducer. Please be sure to call and get your complimentary copy of the Physician's Guide, a valuable manual for the physician interested in contraceptive technique."

* * *

Booth 37

THE MEDICAL PROTECTIVE COMPANY

Wheaton, Illinois

"The most exacting requirements of adequate liability protection are those of the professional liability field. The Medical Protective Company, specialists in providing protection for professional men, invite you to confer, at their exhibit, with the representative there. He is thoroughly trained in Professional Liability underwriting."

* * *

Booths 40 & 41

A. S. ALOE COMPANY

St. Louis, Missouri

"The A. S. Aloe Company in space No. 40 & 41 will display a full line of American-made Stainless Steel instruments, physicians' and hospital equipment, laboratory supplies and apparatus. Feature items will be the new Washington University Portable Obstetric Table, Steeline Furniture, the DeBaKey Direct Blood Transfusion Apparatus, The Aloe General Diagnostic X-Ray unit and other physical therapy apparatus. The display will be in charge of Aloe representative, Max M. Coe."

* * *

Booth 42

GEORGE A. BREON & COMPANY, INC.

Kansas City, Missouri

"George A. Breon & Company, Inc., presents an exhibit of their line of pharmaceuticals, including: Hydrogel Aluminum Hydroxide, for the use in combatting excess acidity in peptic ulcer. It has double the antacid capacity of other aluminum hydroxide preparations, yet does not interfere with normal gastric secretion. Pomfrax; a dehydration of raw, ripe, Washington winesap apples for use in nutritional diarrhea, particularly in infants. Estrogenic Substance; a solution in a special ampul oil base for intramuscular injection."

* * *

Booth 43

AMERICAN OPTICAL COMPANY

Kansas City, Missouri

"The focal illuminator after Dr. Otto Barkan is now available for Ophthalmologists. It is a small, versatile, efficient focal illuminator, hand slit lamp, and transilluminator. As a result of his long experience in gonioscopic investigations, Dr. Barkan suggested the need for this really fine lamp. It has wide adaptability and unusual features—a small but highly efficient lamp as a diagnostic aid."

Booth 44

JOHN WYETH & BROTHERS, INC.

Philadelphia, Pennsylvania

"Physicians are cordially invited to visit Booth 44, where John Wyeth & Brothers will exhibit the following pharmaceutical specialties: Amphojel, Wyeth's Alumina Gel, for the control of hyperacidity and peptic ulcer; Alulotion, Ammoniated Mercury with Kaolin, for the treatment of Impetigo; Bepron, Wyeth's Beef Liver and Iron, for the nutritional anemias; Bewon Elixir, Wyeth's palatable appetite stimulant and vehicle; Kaomagma, Wyeth's magma of alumina and kaolin, for the control of diarrhea and colitis; Silver Pircate, in crystal, suppository and powder form, for the treatment of Trichomonas Vaginitis and acute anterior urethritis."

* * *

Booth 45

H. G. FISCHER & COMPANY

Chicago, Illinois

"H. G. Fischer & Company, 1940 models of x-ray and short wave apparatus are so distinctive, both in improved performance and in various instances greatly lowered in price, that every physician should consider inspection a convention obligation. The complete H. G. Fischer & Company line includes shockproof x-ray apparatus, short wave units, combination cabinets, galvanic and wave generators, ultra violet and infra red lamps and many other units, accessories and supplies. Physicians attending the convention are invited to ask for demonstration of apparatus in which they are interested and to consult with Fischer representative regarding technics made available by Fischer apparatus."

* * *

Booth 47

THE ZEMMER COMPANY, INC.

Pittsburgh, Pennsylvania

"The Zemmer Company will display a number of their leading pharmaceutical products, also distribute samples. A cordial invitation is extended to members of the medical profession to visit their exhibit No. 47 which will be in charge of their representative, Mr. W. H. Alexander."

* * *

Booth 48

SCHERING CORPORATION

Bloomfield, New Jersey

"At Booth 48 Schering Corporation's representatives will be pleased to discuss latest developments in hormone therapy. New products on display will be Cortate (desoxycorticosterone acetate), Anteron (gonadotropic hormone from 'mares' serum), Pranturon (gonadotropic hormone from pregnancy urine), Pranone (orally effective progestin) as well as the other well-known Schering preparations—Progynon-B, Progynon-DH, Proluton, Oreton and Neolopax."

* * *

Booth 49

THE STEFFEN ICE CREAM COMPANY

Wichita, Kansas

"Steffen's Safe Dairy Foods will announce sometime in May the installation of Flash Pasteurization. This new method pasteurizes milk in sixteen seconds and is highly approved by the United States Department of Health."

"Doctors will find the Steffen exhibit on Flash Pasteurization very interesting and informative because of the new flavor and taste that Steffen's Pasteurized Milk will now possess."

A DAY FOR THE SECRETARY

Headquarters—Allis Hotel

MONDAY, MAY 13

An invitation is extended to any girl employed in the office of a member of THE KANSAS MEDICAL SOCIETY. This includes the secretary, nurse, and technician.

9:00 A. M. REGISTRATION—Lounge

9:30 A. M. ADDRESS OF WELCOME—Ballroom

Mrs. Donald MacKenzie, Wichita
President, Wichita Secretaries Club

RESPONSE TO ADDRESS OF WELCOME

Mrs. Lahnoe Euler, Topeka Secretaries Club

10:00 A. M. DRAMATIC SKIT—Ballroom

The Topeka Club will give a presentation of the physician's reception room, showing both the correct and incorrect management of this important responsibility.

10:30 A. M. YOUR DOCTOR'S TELEPHONE—Ballroom

Mrs. Ada Neway, instructor at the Kansas School of Business, will give a recording of several telephone voices. Her discussion of the voice personality will be helpful to all who use the telephone.

11:00 A. M. SYMPOSIUM—Ballroom

1. OFFICE MANAGEMENT

Mrs. Thelma Vaughn, Winfield, will give a paper on general problems involved in the management of the physician's office.

2. HOW WE COLLECT

Miss Gladys Dugan, Arkansas City, will suggest practical methods for collecting the physician's accounts.

3. THE INSURANCE PATIENT

Mrs. Gretchen Moddrell, Wichita, has had experience which will be profitable for all, and will give valuable suggestions concerning these cases.

4. WHEN THE DOCTOR IS AWAY

Mrs. Marie Holman, Wichita, will discuss the problems confronting the secretary when the physician is out of the office.

12:00 A. M. LUNCHEON—Empire Room

Toastmistress: Mrs. George Gelbach

Address: THEY ALSO SERVE

Mr. S. A. Long. Mr. Long is a prominent Wichita business man, civic worker, and outstanding speaker.

(Time will be allowed for a discussion of the organization of a State Secretaries Society.)

2:30 P. M. THE SPEECH PERSONALITY

Mrs. Alice Campbell Wrigley. Mrs. Wrigley is Director of Dramatic Art in the Fine Arts School of the University of Wichita, Campus Division.

Tea will be served by the Wichita Secretaries Club. The program for the day will close with the tea, which will leave time for sightseeing, shopping, and recreation.

EVENTS FOR WOMEN

MONDAY, MAY 13

1:00 P. M. to 5:00 P. M. REGISTRATION and Purchase of Tickets

North Entrance of Forum—All women, whether members of an Auxiliary, or not, are requested to register.

TUESDAY, MAY 14

9:00 A. M. REGISTRATION and Purchase of Tickets

North Entrance of Forum

11:00 A. M. BREAKFAST—*Wichita Country Club*

(840 North Yale, four blocks northeast of Wesley Hospital)

Program: Fashion on Parade—Woolf Brothers

HONORED GUESTS

Mrs. C. C. Nesselrode, Kansas City, Kans.	Mrs. H. N. Tihen, Wichita, Kans.
Mrs. F. L. Loveland, Topeka, Kans.	Mrs. J. M. Porter, Concordia, Kans.
Mrs. N. E. Melencamp, Dodge City, Kans.	Mrs. G. M. Gray, Kansas City, Kans.
Mrs. C. D. Blake, Hays, Kans.	Mrs. R. A. West, Wichita, Kans.

2:30 P. M. PRE-CONVENTION BOARD MEETING

Lassen Hotel, Chamber of Commerce Room

7:30 P. M. DINNER PARTY

Lassen Hotel, Ballroom

Program: Mr. Leo St. Clair—Music Box Revue

BRIDGE AND BACCARAT

HONORED GUESTS

Mrs. L. B. Spake, Kansas City, Kans.	Mrs. C. O. West, Kansas City, Kans.
Mrs. T. D. Blasdel, Parsons, Kans.	Mrs. H. L. Regier, Kansas City, Kans.
Mrs. L. S. Nelson, Salina, Kans.	Mrs. Forster Dennis, Dodge City, Kans.
Mrs. A. C. Flack, Fredonia, Kans.	Mrs. J. S. Reifsneider, Wichita, Kans.

WEDNESDAY, MAY 15

9:00 A. M. REGISTRATION and Purchase of Tickets

North Entrance of Forum

10:00 A. M. GENERAL ASSEMBLY

Allis Hotel

1:00 P. M. LUNCHEON

Allis Hotel Ballroom—Installation of Officers—Program

HONORED GUESTS

Mrs. J. B. Carter, Wilson, Kans.	Mrs. E. J. Nodurft, Wichita, Kans.
Mrs. Alfred O'Donnell, Ellsworth, Kans.	Mrs. W. G. Emery, Barnard, Kans.
Mrs. O. D. Walker, Salina, Kans.	Mrs. M. O. Nyberg, Wichita, Kans.
Mrs. H. L. Scales, Hutchinson, Kans.	Mrs. L. B. Gloyne, Kansas City, Kans.
Mrs. D. W. Basham, Wichita, Kans.	Mrs. R. W. Urie, Parsons, Kans.
Mrs. C. B. Van Horn, Topeka, Kans.	Mrs. F. E. Coffey, Hays, Kans.
Mrs. E. C. Duncan, Fredonia, Kans.	Mrs. L. B. Spake, Kansas City, Kans.
	Mrs. T. D. Blasdel, Parsons, Kans.

2:30 P. M. POST-CONVENTION BOARD MEETING

Allis Hotel

7:00 P. M. ANNUAL BANQUET

Innes Tea Room—The Kansas Medical Society

10:00 P. M. DANCE

Innes Tea Room—Matt Betton Orchestra

AUXILIARY PAGE

PRESIDENT'S MESSAGE

To each and every doctor's wife in Kansas I extend a most cordial invitation to attend the annual meeting of the Auxiliary to The Kansas Medical Society, which will be held in Wichita, May 14 and 15. Mrs. J. Stanley Reifsnider and her committee have planned a most attractive program. Come, bring your husband and enjoy the fellowship this meeting will afford.

Since May of 1939 it has been my happy privilege to serve as President of the Woman's Auxiliary to The Kansas Medical Society. This year has brought much encouragement in the progress and growth of the Auxiliary. We seem to be really serving a purpose. It is always the desire of the Auxiliary to act as a medium to further the purpose of the medical profession.

May I at this time extend to Mr. Munns and his staff my sincere thanks and appreciation for the hearty co-operation he has given me all through the year.

At all times we have had the support of Dr. West and the Advisory Committee. To them I am deeply grateful for their suggestions and advice.

I felt especially fortunate in being so close to Dr. Nesselrode, the State President. He gave of his time most generously in discussing our problems.

This year PUBLIC RELATIONS has been our theme. Many of the Auxiliaries have held Public Relations meetings, at which time our doctors conducted question and answer forums. The feeling among the laity who attended seems to be most encouraging. The results cannot be measured, but we trust the future will bear fruit of our efforts.

Mrs. W. G. Emery, our Press and Publicity Chairman, has most ably kept the membership informed through our News Letter and the Auxiliary Page in the Journal each month.

Ground work plans are being made for a more extensive distribution of Hygeia. We hope they will materialize.

Mitchell County has organized an Auxiliary and will be represented at the state meeting.

Come to Wichita and see for yourself, through the efforts of our Exhibits Chairman, Mrs. E. J. Nodurft, what is really going on in your neighboring communities. Remember the date is May 14 and 15.

My hearty greetings to each and every one of you.

ELLA E. SPAKE, *President.*



PRESIDENT-ELECT'S MESSAGE

The Kansas Medical Auxiliary harbours among its members talents of many and diverse kinds. Because of the structure of its organization and its purpose in existing, we need to employ these various talents. We need and use our many splendid executives in state and county, we need and use our members to disseminate correct ideas concerning health and objectives of the profession and we need and can use the wife of every physician in The Kansas State Medical Society to promote a better understanding inside and outside our medical groups.

We have had a most profitable year with Mrs. Spake as our leader and she's left nothing undone to promote our work. As we start the new year may "the highest achievement of yesterday be the starting point of today."

Come to Wichita to the convention so you may enjoy the hospitality of the Sedgwick County Auxiliary which is so gracious and generous. Come so we may all know each other better and so we can make plans together for the coming year.

MRS. T. D. BLASDEL, *President-Elect.*



<i>Hotel and Location</i>	<i>Single</i>	<i>Double</i>	<i>Twin Beds</i>	<i>Four Persons</i>	<i>Parlor Suites</i>
ALLIS William and Broadway	\$3.00 & up	\$5.00 & up	\$6.00 & up	\$8.00	
LASSEN First and Market	\$2.50 to 4.00 & 2.00 to 2.25	\$3.50 to 5.50	\$5.00 to 6.00	\$7.50 to 8.00	\$8.00 & up
BROADVIEW Douglas and Waco	\$2.00 to 3.50	\$3.50 to 5.00	\$4.00 to 5.00	\$5.00 to 6.00	\$5.00 to 10.00 & 7.50 to 15.50
COMMODORE (Apt. Hotel) 222 E. Elm	\$2.50 to 5.00	\$3.00 to 6.00	\$3.50	\$6.00	
McCLELLAN 201 S. Broadway	\$2.00 to 3.00	\$3.00 to 4.00		\$5.00	
CORONADO 	\$1.00 to 2.00	\$1.50 to 2.50		\$3.00 to 4.00	
SHIRKMERE (Apt. Hotel)	\$2.50 to 3.00 (1 double bed)	\$4.00 to 5.00 (2 double beds)			

PAGE SERVICE

A group of Boy Scouts will be on duty each day to serve as pages and to facilitate in handling telephone calls and urgent communications. Special screens and lanterns will be placed in each section meeting room and names of physicians to be paged will be thrown upon the screens, thus eliminating confusion during the meeting. Members expecting calls are requested to notify the registration desk.

KANSAS STATE HOSPITAL ASSOCIATION

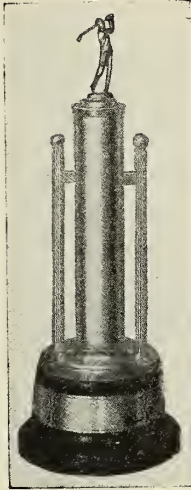
The Kansas State Hospital Association will hold its annual meeting at the Hotel Allis on Thursday, May 16, and Friday, May 17. The members of that organization have been invited to attend all functions of the Society meeting, and all physicians are also invited to attend the sessions of the Kansas State Hospital Association. The program of the hospital meeting will include several nationally known speakers who will discuss hospital problems and hospital management.

SECRETARIES LUNCHEON

A luncheon for secretaries of county medical societies will be held at 12:15 P.M., Wednesday, May 15, in the Broadview Hotel Rose Room. The program will consist of informal discussion of various important business and organization problems of the county and state Society. All county medical society secretaries are urged to attend this meeting. Tickets will be on sale at the Registration Desk.

SKEET TOURNAMENT

Wichita Gun Club, three miles west of the city on the Cannonball Highway, will be the site of the trap, skeet, pistol, and rifle tournament. Grounds will be open for contestants at 9:00 A.M., Monday, May 13, and will not close until 5:00 or 6:00 P.M. There will be no fee for shooting. Targets and shells may be purchased at the club and there will be guns on hand for those men who do not bring their own. Trophies and prizes will be awarded for various divisions.



QUINTON-DUFFENS
TROPHY

GOLF TOURNAMENT

This year the Annual Golf Tournament of the Society will be held at the Wichita Country Club, an eighteen-hole course located at 840 North Yale, four blocks northeast of Wesley Hospital.

Both the course and the facilities of the club house are at the disposal of physicians during the day. Play may be started at 10 A.M. for the convenience of those who wish to participate in the Trap and Skeet Shooting. Most flights, however, will begin about 12:30 P.M. It will be necessary that the player declare himself on the first tee if he wants the round to apply on tournament play.

There will be a number of attractive trophies and prizes both for the par-teasers and those who play golf for fun.



MEAD JOHNSON GOLF
TROPHY



MEAD JOHNSON TRAP
SHOOTING TROPHY

PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

In this, our last President's Page, I want to express my appreciation for the honor that you bestowed upon me two years ago. Secondly, I want to congratulate you upon the readiness with which you have responded to each and every request from the officers of the State Society. Our year has been a pleasant one filled with many activities and many responsibilities. These were made easy by a feeling that we had the support of a membership of a quality and character equal to that of any state medical society within the Union.

May I likewise extend my congratulations to the officers and membership of the Auxiliary of The Kansas Medical Society. The auxiliary units have shown a nice increase in number and likewise there has been an increase in activities, both of which bespeak an interest on the part of our wives.

In relinquishing my duties in favor of Dr. Loveland there is intermingled feelings of regret and joy; feelings of regret in separating ourselves from the very close contact with such a loyal and energetic membership, a feeling of joy and the pleasure I know Dr. Loveland is to have in being associated with this same membership in the same intimate way that I have been for the past twelve months. I congratulate Dr. Loveland on the honor that you have accorded him. I also congratulate him on the pleasure and satisfaction that I know he will experience. I assure him, based upon my own experience, that he will have the continued support and encouragement that the membership at all times accorded me. While I realize that my greatest activities in organized medicine of Kansas are in the immediate past, I do hope and trust that I may continue to enjoy a close relationship to organized medicine for a considerable time to come. The associationship which I have enjoyed has always been an inspiration and encouragement and a source of great satisfaction to me.

With regret I extend for the last time my felicitations as your president.

Yours very truly,

C. C. NESSELRODE, M.D.

EDITORIAL

THE RETIRING PRESIDENT

It is probably true that many members do not fully realize the magnitude of the task assumed by the president of the Society. The duties of that position have, in fact, grown to the place that they require a particularly large contribution of time, energy and money. A president finds it necessary to communicate almost daily with the central office by telephone, letter or personal interview. He must also plan and expedite the work for his year, meet new situations as they arise, make decisions on matters of importance, keep himself informed through study of communications and periodicals, hold himself in readiness to meet with county medical societies, committees of this and other organizations, public officials and other groups and individuals, and all in all, spend what undoubtedly amounts to a majority of his time in the handling of Society business.

How well Dr. C. C. Nesselrode has fulfilled these obligations during the past year is probably indicated by the statement frequently heard in all parts of the state that he has been one of our outstanding presidents. The same fact is also evidenced by a review of the accomplishments of his term.

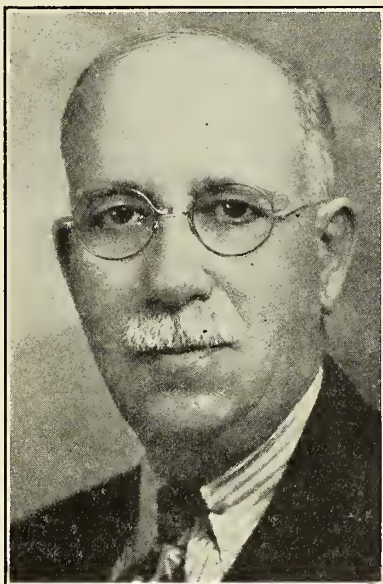
The question of illegal practice of medicine and surgery continued to be one of the major problems during the past year. Since Dr. Nesselrode took office immediately following the close of the last Legislature to him fell the responsibility for many important decisions on this subject. These decisions and other developments including the opinion of the United States Circuit Court of Appeals on narcotics have assisted materially in making it possible to provide competent medical service for the people of Kansas. Likewise, the plan

adopted by the Kansas State Board of Medical Registration and Examination of employing an attorney to assist in the handling of the functions of that Board will have far-reaching effect on this general subject both in the medical and other professions.

Substantial progress was made on the subject of indigent medical care. Through interest and assistance received from the Kansas State Board of Social Welfare it is believed that a plan will be announced within the near future whereby county medical societies will find it easier to organize and offer complete service for their clients.

Post-graduate activity was also continued as a major project. State-wide courses were provided on the subjects of cancer, venereal disease, obstetrics and pediatrics, and courses are to be presented in the nature future on tuberculosis, heart disease, eye, ear, nose and throat. Another interesting and well received post-graduate activity was the five-day post-graduate course on heart disease held in Emporia during last October.

The Society assisted in various Kansas State Board of Health programs including a pneumonia program for indigent persons, the establishment of full-time health units in several additional



DR. C. C. NESSELRODE

counties, and the provision of needed incubators in a considerable number of counties. Through the co-operation and assistance of the Kansas Division of Labor and Industry a new workmen's compensation medical form was completed with many scientific and practical improvements. Two new committees were appointed—a Committee on Locations to assist in providing needed medical facilities and a Committee on Child Welfare for the purpose of dividing the work of the Committee on Maternal and Child Welfare into an obstetrical section and a pediatrics section. Numerous lay educational activities were conducted. The Kansas

Medical Auxiliary assisted materially in this regard and the Committee on the Control of Cancer sponsored an extensive cancer educational program in conjunction with the Woman's Field Army and the Kansas Federation of Women's Clubs.

The Committee on Allied Groups continued its provision of assistance to groups affiliated with the profession. The Committee on Automobile Accidents furthered plans for medical aid to the Kansas Safety Council and the Kansas State Highway Commission. The Committee on Auxiliary assisted materially in the furtherance of the Kansas Medical Auxiliary program. In addition to lay educational and post graduate activities the Committee on the Control of Cancer completed a professional brochure on that subject, assisted on the cancer quackery problem, aided the Kansas Woman's Field Army, and participated in many similar activities. The Committee on Constitution and Rules prepared recommendations on needed changes in the Society Constitution and By-Laws and provided several new methods for improvement of the House of Delegate proceedings. The Committee on Endowment co-operated closely with the University of Kansas Endowment Association and continued plans for the expansion of endowed medical research. The Committee on the Conservation of Eyesight assisted the Division of the Blind of the Kansas State Board of Social Welfare in many ways and participated in numerous programs for the reduction of blindness and impaired eyesight. The Committee on the Study of Heart Disease, in addition to presentation of a post graduate course, surveyed the number and need of electrocardiograph facilities in the state and completed recommendations on ways and means to standardize the reporting of heart disease morbidity and mortality. The Committee on Hospital Survey completed a survey of the number, kind and location of Kansas hospitals and served in a close liaison capacity with the Kansas State Hospital Association. The Committee on Maternal Welfare presented recommendations on this subject to the profession and to Kansas hospitals, commenced study of a lay educational program on maternal welfare, and in other ways furthered its extensive program. The Committee on Medical Economics was active in studies of indigent medical care, medical

service plans, and group hospitalization plans. The Committee on Medical History commenced activity toward the completion of a Kansas medical history. The Committee on Pharmacy continued its assistance as a liaison agency with the Kansas State Pharmaceutical Association. The Committee on Public Health and Education made additional recommendations toward the establishment of an amply staffed and equipped division of public health education in the Kansas State Board of Health. The Committee on Schools of Medicine engaged in programs for the improvement and assistance to the University of Kansas School of Medicine. The Committee on Scientific Work assisted in various ways in developing new interest of the Kansas medical profession in that subject, and was instrumental in commencing a service through the Kansas State Board of Health wherein physicians will receive regular, helpful information concerning epidemics, morbidity and mortality. The Committee on Stormont Medical Library completed recommendations for improvement and more general use of that library. The Committee on the Control of Tuberculosis was active in studying the Kansas silicosis problem, in making preparations for additional Kansas sanatoria facilities, and in programs for diagnosis and prevention of tuberculosis. The Committee on Venereal Disease sponsored a state-wide post graduate program and provided other assistance on the Kansas venereal disease problem.

Although, the above description is obviously incomplete, it possibly affords an illustration of the many fields in which the Society participated during the past year, and of the excellent progress which was made under the guidance of Dr. Nesselrode. Those who worked closely with him know that he placed the Society first throughout the year, that he traveled many thousands of miles at his own expense in its interest, that he made many contributions through which the Society will be better able to fulfill its obligations to public health and good medical care, and that he turns over*to his successor an able and efficient organization which has profited through the leadership of a good physician and a good executive.

The Society salutes him for a job well done.

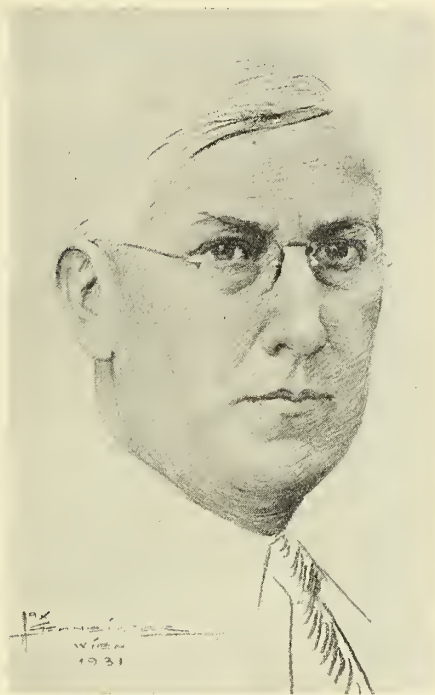
THE NEW PRESIDENT

The Journal joins with the membership in welcoming Dr. Forrest L. Loveland as the President of the Society for 1940-41.

There is probably no physician in the state who is better acquainted with the problems confronting the profession than Dr. Loveland. He has been active throughout his professional career in programs pertaining to public health, preventive medicine, and the provision of medical service, and during the past six years he has served the Society as chairman of its important Committee on Medical Economics. In this capacity he has travelled the state extensively, has availed himself of an opportunity to observe and discuss local and general problems, and in many other ways has accumulated an extensive knowledge of medical service and medical organization. His practical and technical experience coupled with his scientific and executive ability equip him well to accept his presidential responsibilities.

Dr. Loveland will have the distinction of holding two professional presidencies next year. In addition to being President of the Society he will also serve as President of the National Conference on Medical Service—an organization composed of officers of state medical societies and other physicians interested in medical economics.

Dr. Loveland was born in 1885. He was graduated from Creighton University School of Medicine in 1911, and has practiced in Topeka since his graduation. He specializes in internal medicine.



DR. FORREST L. LOVELAND

Kansas Medical Society. Since that time Kansas has made consistent progress in its state meetings to the place that its present average attendance of 1,000 to 1,100 members from a potential of 1,550 members is one of the highest ratios of per capita attendance in the country; and to the further place that Kansas has been appraised by exhibitors and other sources as having one of the best state meetings. The program and other description of the events contained in this issue of the Journal show clearly that the 1940 meeting will not be an exception and the Sedgwick County Medical Society may justifiably take pride in the arrangements it has provided.

The scientific program includes some of the leading physicians in the country and the subjects have been well chosen on the basis of interest to both the general practitioner and the specialist.

The meeting place is ample in size and this fact has made it possible to present the largest number of technical and scientific exhibits in the history of the Society.

All past events and several new ones are to be provided. The day for physician's secretaries is an original and interesting addition. The joint

meeting of the Kansas State Hospital Association will make it possible for physicians interested in hospital management to attend a special section on that subject, and will also enable many hospital executives to attend the Society meeting.

Wichita is centrally and conveniently located; its hotel facilities are entirely adequate; and its county medical society has made available to you in the 1940 meeting not only an opportunity for a good time, but as well three days of excellent post graduate instruction. If you have not already done so—make plans to be in Wichita from May 13 to May 16.

81st ANNUAL SESSION

On February 10, 1859, a group of twenty-nine physicians met at the Eldridge Hotel in Lawrence to hold the first annual session of The

THE DOCTOR'S SECRETARY

An innovation in state medical meetings is being inaugurated at the Eighty-first Annual Session by way of a one-day meeting for doctors' assistants—or "office girls." Registration for this event will begin at 9:00 A.M. Monday, May 13, at the Allis Hotel. Valuable information on office procedures, collections, management of patients, telephone hints, personality aids, handling of the office when the doctor is away and many other pointers will be presented by means of drama, symposium and discussion.

Because the program is full of practical information for the "office girl" it is suggested that the doctor sponsor her way to this meeting. It should well be worth the small investment involved and should pay for itself many times in the manner of increased efficiency and new ideas for the office.

See that your "Girl Friday" is here on Monday.

OFFICIAL PROCEEDINGS

FOREWORD TO DELEGATES

Since the agenda of the House of Delegates has increased appreciably during recent years, an attempt has been made this year to save time necessary for reading of reports by publishing in advance as many of these as possible.

All of the following reports will be discussed and presented for adoption but since they will not be read all delegates are requested to become familiar with them in advance of the meeting.

The following report was presented by John M. Porter, M.D., Secretary of The Kansas Medical Society:

TO: THE HOUSE OF DELEGATES:

Your constitutional secretary has less and less to report as the executive secretary and the central office grows more and more efficient and experienced. The time will come if their energy and ability continue unabated when the secretary can report merely that he served as chairman of the committee on scientific work as provided by the constitution, attended the council meetings, and signed the pay checks for the full-time employees of the society.

Even if that Utopian situation arises it may still be

wise to retain a medical man in the position of secretary. Certain problems occasionally face the Society which require medical training for solution and no amount of tact, common-sense, or executive ability allow a lay secretary to substitute for the medical man under these circumstances. The past year has seen the utmost co-operation between the central office and your elected officers in that regard. Largely to offset any lay domination, copies of all correspondence signed by the executive secretary are sent at the end of each month to the secretary, who reads them, comments on them if indicated, and forwards them to the president of the Society. Likewise, copies of all vouchers for expenses incurred by the central office, the Journal, the various officers and committees, etc., are filed with the secretary and president as well as the treasurer.

Your secretary has felt himself in rather close touch with most of the Society's activities during the past year through these means coupled with frequent visits to the Topeka office, attendance at council and committee meetings, through the reception of all bulletins and special communications and attendance at a few component society meetings with other officers of the society.

This participation in the work of The Kansas Medical Society is especially desirable for if any criticism of the organization is justified it is that too few of our members take the active part they are entitled to in the Society's varied program. Within the memory of many of us, the State Society was merely a glorified county medical society with a Journal, an annual meeting, and a few committees, often existing in name only. The changes wrought in a few years by a handful of hard-working and sacrificing men can best be appreciated by a study of the reports in this issue of the Journal, or better yet by attendance at the annual meeting of committee chairmen when one after the other committee reports on the work it is doing in such varied fields as Medical Economics, Control of Tuberculosis, Conservation of Eyesight, the School of Medicine, the Study of Heart Disease, and the like. The inspiration that comes from this tremendous program can be appreciated only by having a part in it. The only requirement is a willingness to work, and the man who makes himself available is sure to be recognized.

The past year has seen the creation of two new committees, one through divorcing the activities of Maternal and Child Welfare formerly combined, and the other to answer the requirements of placing men in new locations. As these enlargements offer new opportunities for work by other members they are a step in the right direction. The more of us who are working at the Society's business, the better for the society.

Your executive secretary is reporting in detail on the year's membership and there is no occasion to repeat anything except to emphasize the appreciation due the faithful county secretaries who have made this total possible through their zeal in collecting dues and keeping the local units alive. As their sole reward for a year of often unrecognized work the secretaries are again to be entertained at a luncheon at the Wichita meeting. The Committee on Public Policy and Legislation has agreed to furnish the chief part of the program so that there will be a better state-wide understanding of the work done by this all-

important group. In the discussion which it is hoped will follow the secretaries will have an opportunity to comment, complain, or brag as they choose. Various other topics related to membership, dues collection, lapsed memberships, the responsibility of the local society to the defense fund, and the like are also scheduled for discussion.

As his reward for work done or left to the executive office, your secretary was furnished a trip to Chicago in November for the Annual Conference of Secretaries of Constituent State Medical Associations. The opportunity of observing some of the work done by other state societies and their officers as it was reported at this meeting was a profitable experience.

At the close of my one year as your secretary I can say that the small amount of work I have been able to do has been an illuminating experience for me in the diverse activities and manifold efforts of the Society. My relationships with your elective officers, the editorial board, the executive secretary, and the employees of the central office have been very happy. The few sacrifices in time and energy required in these duties have been more than offset by the opportunity to co-operate in the advancement of organized medicine. As a member of the Council and the Executive Committee, chairman of the Committee on Scientific Work, ex-officio member of some of your other vital committees, and through the privilege of working with the central office your constitutional secretary still has important duties and privileges. For this reason I would recommend an annual choice for this position and under no circumstances the continuance in office of one man through precedent. It has been a pleasure for me to serve you.

The following is the report of the Councilor of the First District:

TO: THE HOUSE OF DELEGATES

All of the counties of the First District are organized. Some have small membership and meet with nearby larger societies. The smaller societies meet every quarter. The larger societies meet every month. Most of the men are members of their county societies. The average attendance is seventy-five per cent.

Due to a certain plan in Marshall County all of the men are members. This plan consists of putting all fees received for diphtheria immunization campaigns, into the treasury of the county society. This pays all dues, banquets, expenses and leaves some money to spend for medical education in the county newspapers.

There has been much interest in cancer meetings as well as diphtheria immunization of school children in this district.

Respectfully submitted,

J. W. Randall, M.D.,
Councilor, First District.

The following is the report of the Councilor of the Second District:

TO: THE HOUSE OF DELEGATES

There is the following to report from the Second District. A personal letter was sent to each member in the district shortly after the annual meeting last year. I have enjoyed visits to most of the societies in the district and

have maintained contact with the societies on various matters concerning their organizations.

A meeting for presidents and secretaries of the county societies of the Second District was held at the University of Kansas Hospital, during the Spring Post Graduate Clinics, at which time the subjects discussed by the state Councilors in their mid-winter meeting, were reviewed. Mr. Clarence G. Munns attended the meeting and gave a very interesting review of medical problems.

The F. S. A. has been active in only two counties of the District up to date. As yet there is nothing definite to report on their plans.

Respectfully submitted,

O. W. Davidson, M.D.,
Councilor, Second District.

The following is the report of the Councilor of the Third District:

TO: THE HOUSE OF DELEGATES

I am happy to report that there has not been any difficulty in Southeast Kansas, Third District, during the past year.

Respectfully submitted,

J. D. Johnson, M.D.,
Councilor, Third District.

The following is the report of the Councilor of the Fourth District:

TO: THE HOUSE OF DELEGATES

During the past year, the societies in Lyon, Shawnee, Wabaunsee and Osage have been active, holding regular monthly meetings. The officers in each society have been very co-operative with the State Society and in each instance, have carried out the programs of the state Society, both in a scientific and legislative way.

Organization of Morris County into an individual society is planned within the next few months. Coffey County meets in a jointly called meeting with the dentists and druggists in their county.

There appear to be no special problems at the present writing.

Respectfully submitted,

J. L. Lattimore, M.D.,
Councilor, Fourth District.

The following is the report of the Councilor of the Fifth District:

TO: THE HOUSE OF DELEGATES

Your councilor for the Fifth District begs leave to report that organized medicine has been running a smooth course in the Fifth District for the past year.

The only unusual thing that we have done was that the Rice County Medical Society acted as host to a meeting of all the component societies of the Fifth District. This meeting was held on March 22, 1940, at the banquet hall of Sterling College, Sterling, Kansas.

The speakers were Dr. John S. Bouslog, of Denver, secretary of the Colorado Medical Society; Mr. Clarence Munns, of Topeka, our Executive Secretary; and Dr. C. C. Nesselrode, of Kansas City, our President.

Respectfully submitted,

M. Trueheart, M.D.,
Councilor, Fifth District.

The following is the report of the Councilor of the Seventh District:

TO: THE HOUSE OF DELEGATES:

Cloud County reports an excellent membership, four business and one scientific meeting during the year. They have worked out a satisfactory plan with their county commissioners for the indigent care. Beginning with this year they have adopted the F. S. A. program. The society participated in a county wide diphtheria immunization.

Republic County reports an excellent membership and regular meetings throughout the year. They have recently adopted the F. S. A. program.

Mitchell County reports a good membership with regular monthly meetings. They have decided to adopt the F. S. A. program provided they are furnished a minimum of 150 families.

Washington County reports more than 100 per cent membership as all their doctors belong to the society and two who reside outside the county continue their membership in their society. Regular monthly meetings have been held throughout the year.

Jewell County reports a good membership and five regular meetings during the year. They have adopted the F. S. A. program recently.

Clay County reports all doctors in the county with one exception, were members of the society. Regular monthly meetings were held. Dr. C. C. Stillman of Morganville was elected to honorary membership in the society.

Respectfully submitted,

F. R. Croson, M.D.,
Councilor, Seventh District.

The following is the report of the Councilor of Eighth District:

TO: THE HOUSE OF DELEGATES:

The Eighth District has progressed very satisfactorily during the past year though the annual report will contain no spectacular array of verbiage. The various societies have devoted their usual time to scientific discussions as nearly as the councilor can learn and have also spent some time discussing the general problems of indigent care.

Lincoln County has contracted with the F. S. A. to care for their families at \$30.00 per year per family. So far as this Councilor knows, this is the only county of this district to have signed during the preceding year. This was done by the majority vote of the Lincoln County Doctors of Medicine. Some discontent has already been expressed and where such exists, it should be expressed in order that councilors may be in a better position to advise other counties.

It is to be hoped that a free expression of opinion on the various important matters before Kansas Medicine will continue to be given your Councilor in order that he may reflect as far as possible the composite opinion of the physicians he tries to represent.

Respectfully submitted,

L. S. Nelson, M.D.,
Councilor, Eighth District.

The following is the report of the Councilor of the Ninth District:

TO: THE HOUSE OF DELEGATES

Very little of interest has transpired in the Ninth Dis-

trict during the past year. The number of members in the component societies is thirty-seven out of forty-four who are in practice within ten counties. Two members have been dropped because of change of residence and affiliation with other societies. One new member has been added.

Society meetings were held at regular intervals with a great deal of interest shown. Post graduate lectures on cancer control and venereal disease control were much appreciated and the members are hoping that it will be possible to continue them.

The F. S. A. insurance program has been tried for several months in all the counties with moderate success. The option to discontinue or to go on with the program will depend upon the various units that have been set up.

Respectfully submitted,

G. W. Hammel, M.D.,
Councilor, Ninth District.

The following is the report of the Councilor of the Twelfth District:

TO: THE HOUSE OF DELEGATES

We have four medical societies—the Meade-Seward, the Finney County, the Ford County, and the Twelfth District Medical Society in this district. They are all having good programs and are well attended.

In the past year the Farm Security medical plan has been operative in the district as a unit, comprising eighteen counties. It was undertaken for a study of its faults and merits. The reaction of the physicians has varied, some giving favorable comments and some adverse. At a recent vote of the members of the district for a second year's trial the vote was two to one for its continuance. As a result of the year's experience it is hoped alterations to be made will greatly improve its functioning.

We have had a number of changes among our members, by death, change of location and new arrivals.

A salutary spirit of fraternalism and cooperation exists throughout the district.

Respectfully submitted,

G. O. Speirs, M.D.,
Councilor, Twelfth District.

The following report was presented by George E. Milbank, M.D., Chairman of the Committee on Allied Groups:

TO: THE HOUSE OF DELEGATES

Your committee on Allied Groups wishes to make the following report on their activities for the past year: The committee met in Wichita, October 15, 1939, members present being Dr. Geo. E. Milbank, Wichita, Chairman; Dr. C. A. Hellwig, Wichita; Dr. W. E. Janes, Eureka; Dr. A. C. Eitzen, Hillsboro. Other members of the Society present at the meeting were Dr. W. P. Callahan, Dr. J. F. Gsell, Dr. Francis Schiltz, Dr. N. C. Nash, and Dr. A. P. Gearhart of Wichita. Mr. J. F. Austin, executive secretary of the Sedgwick County Medical Society and Mr. Clarence G. Munns, executive secretary of the Society were also present.

The chairman presented a report of the work accomplished by the committee last year. The committee requested the central office to write the Board of Medical Registration and Examination a letter of appreciation for its interest and assistance in clarifying

the committee's resolutions in regard to radiology and the administration of anaesthetics, which did much to define the place of lay technicians and nurses in these two fields of medicine.

They then entered into a discussion and study of the speech correction classes conducted by Dr. Martin Palmer at Wichita University, and at several other places in the state. After extensive discussion of the matter the committee adopted the following resolution with the instructions that a copy be forwarded to Dr. Palmer:

The Committee on Allied Groups of The Kansas Medical Society wishes to express its appreciation for the interesting and complete report Dr. Martin Palmer has furnished to the committee in regard to his speech correction classes.

It is the opinion of the committee, that the methods and procedure described by Dr. Palmer pertain to educational activities in the teaching and training of individuals as distinguished from therapeutic treatment and healing of individuals.

The committee commends Dr. Palmer for his interest in this field, and it will be happy to assist him in any way desired in the instances of any medical or surgical problems which might arise in connection with his work.

The committee also requested county medical societies of the places, where classes of his kind are being held, to study and report concerning the progress and improvement of patients trained by Dr. Palmer and his associates.

The committee also considered a resolution from the Radiologists of Kansas as follows: "We protest the exclusion of Radiology as a branch of medicine in the Crippled Children's Commission, and instruct the officers to take up with the proper authorities steps to correct the present errors."

In the course of the discussion it was brought out that the Crippled Children's Commission is paying a fixed charge per hospital day for Crippled Children and that no provisions are made to pay for x-rays or materials. As a result many radiologists, who are working on a percentage basis, are forced to do work without receiving remuneration for the same. It was this unjust situation which the radiologists of Kansas were protesting. The Allied Groups committee passed a resolution requesting, that the Kansas Crippled Childrens Commission designate radiology as a part of the practice of medicine, and urged that some arrangements be made to pay radiologists for services rendered in Crippled Childrens cases.

Further information was obtained and considered in regard to several allied groups but no definite action was taken. Dr. C. A. Hellwig was asked to make a further study of lay clinical laboratories and to report back to the committee. Dr. Hellwig has consulted a number of physicians in this field, and it seems to be the consensus of opinion that the goal of the future should be to have clinical laboratories headed by doctors of medicine, but that in view of the fact, that there were some lay laboratories that were giving good service to the members of the profession served by them, that some consideration should be given to them during a period of transition, which is apparently going on in that particular field.

The committee feels that it has made some progress during the year in dealing with groups allied to medicine, but it feels that there is still much to be accomplished.

The following report was presented by C. Omer West, M.D., Chairman of the Committee on Auxiliary:

TO: THE HOUSE OF DELEGATES

It is with a great deal of pleasure that we make this annual report in regard to the activity of the Auxiliary to The Kansas State Medical Society.

During the past year the Auxiliary has accomplished many fine things. We wish to mention three which we consider well worth while and through which the Auxiliary will be able, in the future, to make many valuable contacts for the medical profession of the State of Kansas.

First: During the past year teas have been held by several Auxiliaries, to which they invited the leaders of various clubs and organizations. At these social meetings, doctors gave short talks and answered questions presented by the different clubs, thus promoting a closer contact between the leading clubwomen of the community and the medical profession.

Second: Speakers' Bureaus have been established in the various Auxiliaries over the state, where lay organizations may obtain speakers on medical subjects. This bureau has contacted various club program chairmen, and it is believed there will be many requests for medical programs next year in lay clubs.

Third: An increase of members in all Auxiliaries and one new organization in Mitchell County which makes the present membership the largest in the history of the Auxiliary.

We want to take this opportunity to thank Mrs. L. B. Spake, President of the Auxiliary and her fine Board for the cooperation they have extended the Auxiliary Committee during the past year. It has been a joy to work with them and I feel that they have advanced the program of the Auxiliary in the State of Kansas to a marked degree.

The following report was presented by Lyle S. Powell, M.D., Chairman of the Committee on Conservation of Eyesight.

TO: THE HOUSE OF DELEGATES:

I have the honor to submit the following report of the activities of the Committee on Conservation of Eyesight of the Kansas Medical Society for the year ending May, 1940:

The committee maintained the previously established cordial relationships with the State Board of Social Welfare. The closest co-operation has existed throughout the year. The committee at its meeting on October 1, 1939 voted to again offer their services to the Board of Social Welfare, Division of the Blind, as an advisory board. The committee has attempted to maintain the closest co-operation with the State Ophthalmologist and has offered various suggestions in connection with the medical blind program.

At the October meeting considerable time was spent in the discussion of post-graduate work for eye, ear, nose and throat specialists. Two separate sub-committees were appointed—one to study the possibilities and need for post-graduate courses for general practitioners and another to canvass the eye, ear, nose and throat men of the state regarding the possibility of sponsoring post-graduate work for our own specialists. At the meeting

held on February 4th these sub-committees reported the results of questionnaires which were sent out to the medical profession of the state. In both instances there seemed to be a demand for post-graduate work. Accordingly tentative plans are being made to meet this demand during the coming year.

Plans have been completed for the issuance of a second series of educational leaflets in conjunction with the State Board of Social Welfare. These educational leaflets will be aimed at the prevention of eye injuries. The first series of instructional leaflets has been continued in distribution to good advantage.

The committee has carried on the eye, ear, nose and throat section in the Journal and is endeavoring to stimulate interest among the eye, ear, nose and throat men of the state in the preparation of case reports, clinical research, and investigative medicine.

Individual committee members have attended meetings with members of similar committees of other states and have maintained considerable correspondence with committee members from other states.

The following report was presented by Arthur W. Fegty, M.D., Chairman of the Committee on Constitution and Rules.

TO: THE HOUSE OF DELEGATES:

Your committee has had no called meetings but has functioned by correspondence. After careful consideration we offer the following suggestions which we believe will expedite the routine business of the House. Should trial prove their value, the principles of same can be included in the by-laws at a latter session.

Suggestion No. 1—Provide a secretary's desk and a doorman at the entrance to the meeting place of the house of delegates, so that each person attending may be checked off from the list of delegates already sent the secretary, ten days in advance of the meeting. Likewise checking off other official members, including past-presidents, officers and councilors. Visitors should be registered and seated apart from official delegates.

Suggestion No. 2—Permit the president to appoint from the list of known delegates prior to the meeting time, a special Committee on Reports of Officers, Councilors, Defense Board, and Editorial Board. This committee should meet on the morning of the first program day, should carefully scrutinize each report whether previously printed in the Journal or handed in later, summarize the vital points contained therein, together with any recommendations for the betterment or consideration of the Society and report their findings at the first meeting of the House.

Suggestion No. 3—Permit the president to appoint from the list of known delegates prior to the meeting time, a special committee of five or more as a Reference Committee on standing committee reports, resolutions, etc. This committee should have a meeting on the morning of the first program day to scrutinize the reports of the various standing committees which may have already been printed in the Journal, or handed in later, summarize the vital points contained therein, consider any and all resolutions which may be offered, and made comprehensive report at the first meeting of the House. They should likewise have an open meeting on the second day of the program for open hearings on any resolutions or recommendations which may have been made in reports, resolutions proposed by the com-

ponent societies, or any other vital matter which may be brought up in meeting and referred to it for consideration. Final report asking vote of the House should be made at the second meeting of the House.

Suggestion No. 4—The Committee on Constitution and Rules report if any amendments are to be introduced, should be presented at the first meeting. Announcement should be made of an open meeting on the second day, for hearings from any and all members who may wish to question, change, or modify suggested amendments. Vote on amendments should be taken at the second meeting of the House. Any amendments to the constitution would need to be printed in the Journal twice prior to the session. By-laws amendments need only to be read at the first meeting and laid over one day before vote is taken.

Suggestion No. 5—Authorize the publication in pamphlet form of the original charter, constitution and by-laws as amended to date, and the code of ethics of the A. M. A. and distribution to the membership.

We present the following amendments for consideration and ask for a vote on them at the second meeting of the House.

Amendment No. 1—Amendment to By-Laws, Chapter IX—Defense Board—Section 2. The section now reads:

"Defense assistance shall be available only to members of this Society. No physician shall be defended for any action unless he was a paid-up member of this society and a resident of this state at the time when the alleged malpractice was committed."

We would suggest a more specific wording, as follows:

"Defense assistance shall be available only to members of this Society; only in claims or suits alleging malpractice based on professional services rendered in the practice of his profession, within the State of Kansas, during the time he was a paid-up member of this Society, and only in claims or suits instituted in the courts of the State of Kansas. There shall be no exception unless recommended by the Defense Board, and approved by the Council."

Amendment No. 2—Amendment to By-Laws, Chapter IX—Defense Board—Section 6. In the middle of this section the following sentence appears:

"The sum approved shall be subject to defense expenditure by the Defense Board upon vouchers signed by the Treasurer and countersigned by the Chairman of the Defense Board."

Since the defense fund is now merely a budgeted amount of the general fund, this makes some confusion as to the signing of checks, and we believe should be changed to read:

"Bills for defense expenditure, authorized by the Defense Board, and approved by the Chairman, shall be paid by vouchers signed by the Treasurer and countersigned by the President and Secretary, and charged against the Defense Fund for that year."

The remainder of that section relating to an insufficient budget and to surplus in any one year should remain as it is.

Amendment No. 3—Amendment to By-Laws, Chapter X—Editorial Board—Section 7. Lines 4, 5 and 6 now read:

"Expenditures may be made by authorization of the Editorial Board upon vouchers signed by the Treasurer and countersigned by the Chairman of the Editorial Board."

This should be changed to read:

"Bills for expenditures authorized by the Edi-

torial Board and approved by the Chairman of the Board shall be paid by vouchers signed by the Treasurer and countersigned by the President and Secretary."

Amendment No. 4—Amendment to By-Laws, Chapter VII—Duties of Officers—Section 6. In line six the following appears:

"He shall pay all authorized obligations of this Society by vouchers which shall be countersigned by the President, except as is otherwise provided in these By-Laws."

This wording should be changed as follows:

"He shall pay all authorized obligations of this Society by vouchers which shall be countersigned by the President and Secretary."

Amendment No. 5—An amendment was presented at the 1939 meeting raising the dues to \$15.00 which could be voted upon at the coming spring meeting. We suggest the re-wording of this amendment as follows:

"The amount of the annual assessment of this Society shall be not more than fifteen dollars per member, the exact amount to be determined by the Council after consideration of the annual budget for the ensuing year and to be announced to the various component societies not less than three months before the beginning of each fiscal year. Such assessment shall be levied against and paid by the component societies in the manner provided by this Constitution and By-Laws, except that any new member to this State Society being accepted by a component society after July 1, shall be assessed one-half the sum decided upon by the Council, and shall be accorded all rights and benefits of this Society, including defense, until the succeeding January 1."

Amendment No. 6—Amendment to Chapter XI—Committees—Section 13. In conformity with recommendations made by the Committee on Maternal and Child Welfare, and the Kansas Academy of Pediatrics in that while the work of this committee is related and overlaps, there really should be two separate and distinct committees to cover the individual fields. The new wording shall be as follows:

"Section 13 (a). The Committee on Maternal Welfare shall consist of at least five members. It shall be the duty of this committee to secure all available data on the subject of Maternal Welfare, and the field of Obstetrics in general, to disseminate information thereon, and to endeavor to assist the profession in general to improve technique and elevate the standards of this branch of medicine. At least two members of this committee shall have served on the retiring committee.

(b). The Committee on Child Welfare shall consist of at least five members. It shall be the duty of this committee to study and secure all available data on the subject of Child Welfare and the field of pediatrics in general, to disseminate information thereon, and to assist the profession in general to elevate the standards of this branch of medicine.

Amendment to Section 1—(same chapter)—In the list of committees, the Committee on Maternal and Child Welfare is hereby deleted, and in its place,

Committee on Maternal Welfare

Committee on Child Welfare

are inserted.

The above amendments are offered for your consideration and should be voted upon either individually or as a group at the second meeting of the House.

The following report was presented by Howard E. Snyder, M. D., Chairman of the Committee on Control of Cancer:

TO: THE HOUSE OF DELEGATES

Your Committee on Control of Cancer wishes to report a very active year particularly with reference to the program of lay education. Early in July 1939, the Committee met and planned an extensive lay educational program on cancer to be carried out in co-operation with the Women's Field Army of the American Society for the Control of Cancer and the Kansas Federation of Women's Clubs. It was decided that this year public meetings throughout the state should feature skin cancer, and suggested that in succeeding years other phases of the cancer problem should be featured in similar programs. An effort has been made to present programs in every sizable town in Kansas. In many of these towns programs have been presented both in high schools and to the lay public in open meetings. Programs have been presented in many of the colleges.

To facilitate the presentation of these programs, the Committee on Cancer prepared two talks, one on skin cancer, and one on the general cancer problem. These talks were published in the September issue of the Journal and reprints of these talks were sent, along with a bulletin explaining the educational program, to the secretary and president of every County Medical society in the state. In addition, several sets of Kodachrome lantern slides on skin cancer were prepared and made available to representatives of county medical societies throughout the state for use at these meetings. Film strips and lantern slides in black and white on skin cancer were also prepared and were used when the Kodachrome slides were not available.

The committee made it a matter of policy that speakers for public meetings in any county should be selected by the county medical society of that locality. The committee was asked to furnish speakers for many of these meetings.

The committee has worked in close co-operation with the officers of the Women's Field Army throughout the state, and to them must go the credit for the large number of meetings which have been held this year. Every councilor district was organized and nearly every county had a county captain. In addition, Mrs. Donald Muir, the state commander, enlisted Miss Georgiana Smurthwaite, Kansas Home Demonstration leader, in the work of the Field Army. Miss Smurthwaite has been made a member of the executive committee and through her the Field Army has received valuable assistance in organizing the work in many counties, and also has been able to contact with their literature, the 2,400 women throughout the state who are members of home demonstration groups.

The professional education program has been continued. Dr. Maurice V. Laing presented a post-graduate course on cancer in six locations over the State of Kansas. The course consisted in lecture and lantern slide presentations on the subjects of the general cancer problem, cancer of the skin, cancer of the lips and buccal cavity, and cancer of the breast. His presentation was both interesting and instructive and for the most part the meetings were well attended.

The committee has finally secured all of the scientific articles for the brochure on cancer which was planned by Dr. Nesselrode's committee last year. The

material is just about ready for the printer and when the brochure is finished, it will be distributed to all regular physicians in the state. Publication of this brochure has been made possible by a grant from the Kansas State Board of Health.

This year the committee appointed one of its members, Dr. Hellwig of Wichita, as editor of the cancer section in the Journal. Dr. Hellwig has supervised the articles prepared for this section of the Journal and has written a very excellent paper on cancer quackery. Reprints of this paper with some modifications have been made for distribution to the lay public chiefly through the Women's Field Army.

At the instigation of the committee, arrangements have been made for the discussion of cancer topics by guest speakers at the State Meeting in Wichita. Dr. Trueheart has prepared an exhibit on skin cancer for this same meeting and the committee has prepared an exhibit depicting the work of the Committee on Control of Cancer in the past several years. In connection with this exhibit, film strips on cancer of the breast, cancer of the uterus, and Madame Curie and radium are projected. The new sound film on cancer prepared by the American Society for the Control of Cancer is also available for showing at this exhibit.

Through the Society central office at Topeka, a questionnaire has been sent out in order to complete a survey on cancer quackery in Kansas. A survey has also been made of cancer therapy equipment available throughout the state.

Through the central office, also, there has been a continuation of the investigation of the work of the Nickol's Sanitarium at Savannah, Missouri.

The lay and professional loan packets on cancer have been revised and multiplied and have been available to all requests to the office of the State Society.

The committee wishes to express its appreciation to Dr. F. P. Helm, Chairman of the Kansas State Board of Health, who has made possible the post-graduate course on cancer and the publication of the brochure on cancer and has also made available to the Women's Field Army some 25,000 pieces of literature for distribution to the lay public.

The committee wishes also to express its appreciation for the excellent cooperation which it has received from the county medical societies throughout the state in furnishing speakers for lay meetings in the educational program.

The committee is happy to report that the mortality statistics furnished us by the Kansas State Board of Health for 1939, show a reduction in the mortality from cancer of the skin, cancer of the lips, and buccal cavity. We feel that this is beginning evidence of the success of the lay and professional programs of the past four or five years.

The following report was presented by Henry N. Tihen, M. D., Chairman of the Committee on Control of Tuberculosis:

Through their representation on the tuberculosis committee, the state and local health authorities, the Kansas Tuberculosis Association, the Norton Sanitarium, and the medical profession, have been jointly attacking the various tuberculosis problems as they arise, and are working in cooperation in these matters.

With the rapid filling up of the available beds at the Sanitarium at Norton, the State again faces a short-

age of institutional tuberculosis beds, and this problem is receiving consideration.

Likewise, new attention has been centered on the tuberculosis problem in the Tri-State area, and the committee hopes to give some assistance in this with the addition to the committee of two members from this region.

I believe that the tuberculosis work is progressing very satisfactorily at the present time. It is only by persistent work that this progress can be maintained.

The following report was presented by L. S. Nelson, M. D., Chairman of the Committee on Defense:

TO: THE HOUSE OF DELEGATES

There have been six cases handled during the preceding year, only three of which were filed during 1939, and some of those have already been disposed of. Our defense councils have been handling these matters as rapidly as possible and have consummated as many of them as they could, all satisfactorily to the men being defended. A detailed report is purposely omitted but all information is in the hands of the Defense Board as a matter of record and is available to any person having the right and authority to examine it.

It seems in order for your Defense Board to call attention to a few important points with reference to malpractice proceedings:

1. It is well for the membership to remember that we can only defend physicians who are bona fide members of The Kansas Medical Society with all dues paid.

2. Our constitution states that we are to defend for malpractice only.

3. (We believe this to be especially important.) Every physician should be especially careful in his remarks concerning a colleague and that colleague's previous care of any case, which remarks may be used as the basis for a suit, and malpractice suits usually occur in epidemics.

4. All electrical and x-ray equipment should be inspected frequently enough to prevent the possibility of accident.

5. X-ray men giving deep therapy treatment should explain the serious nature of the treatment and get a signed release from the patient whenever there is danger of burn.

6. In fracture cases, a careful evaluation of the end results before treatment is begun helps a great deal in preventing discontent after the treatment has been carried on, and the x-ray records are very valuable in all such cases.

7. All office help should be carefully selected with a view to intelligence and in general, untrained help should not be allowed to carry any responsibility so far as treatment is concerned.

8. Experimental procedures are dangerous and should be limited.

A general comment from the Defense Board we are sure would include the reiteration of the fact that if in our contact with patients we would remember to treat the other physician as we would like ourselves to be treated under similar circumstances, there would be little opportunity for misunderstandings, and it would lessen the occurrence of malpractice proceedings. We

have an enviable record for the last few years in connection with this matter but the ideal would be for no suits to be filed against a member.

The following report was presented by H. L. Chambers, M. D., Chairman of the Committee on Endowment:

TO: THE HOUSE OF DELEGATES

The committee on Endowment submits the following report:

1. Throughout the year, cordial relations have been maintained with the Endowment Association of the Kansas University through its secretary-treasurer, Dean Olin Templin. Our fields overlap somewhat, or maybe we better say our field is included in theirs, and our interests are such that we furnish each other material support.

2. If any doctor knows of a possible grant or bequest for any matter in aid of medical research or medical study, he should get his information to Dean Templin who will furnish forms, legal supervision, and final executives for translating such dream into action. In any event, provision will be made to carry out the wishes of the grantor, meticulously.

3. The committee met in December and with Dean Templin present and participating, the question of the Robinson bequest to the University of Kansas was discussed. While the technical legality of the way in which it has been managed was and is fully recognized, the essential injustice of it to Governor Robinson and to the Medical School is too glaring to be passed in silence. After developing plans to reopen and reconsider the matter with a view to bringing the action in line with the desire and intention of the maker of the bequest, the following was passed:

"Moved and approved unanimously that we ask Dean Templin to write up a suitable description of the Robinson Bequest situation for presenting to the executive committee of The Kansas Medical Society, looking finally to an attempt to sell the Robinson estate and use the money for a Medical Science Building in Kansas University at Lawrence, Kansas."

4. On approaching the responsible people of K. U. we got the impression that they do not wish this matter reopened, so nothing more was done about it.

5. The committee also considered the very interesting will of Mr. Jacob Aukenbach who formerly lived at Hardtner in Harper County, and whose estate has been the subject of several law suits. Mr. Aukenbach provided in one section of the will that an amount of \$125,000.00 should be used to construct a hospital at Hardtner, and requested that the hospital should be operated by the Sister of Mercy. Certain legal and practical complications have developed in the execution of the bequest by reason the Sisters have declined the offer and as the court supervising the settlement of the estate has been in doubt as to whether the hospital could be economically operated in the above community of 300 persons.

6. There are grants, donations, bequests, etc., to the amount of around \$70,000.00 in the custody of the University of Kansas Endowment Association and which are now being used to promote medical study and medical research.

7. We respectfully urge another reading of paragraph "two".

The following report was presented by Ray A. West, M. D., Chairman of the Committee on Maternal Welfare:

TO: THE HOUSE OF DELEGATES

This committee held a meeting on November 12, 1939. Members present were: Doctors L. A. Calkins, Kansas City; C. A. Meredith, Emporia; F. P. Helm, Topeka; H. R. Ross, Topeka; Porter Brown, Salina; Mr. Clarence G. Munns and R. A. West.

This committee approved a recommendation by the Kansas Academy of Pediatrics, that the work of the committee on maternal and child welfare be divided into two committees: The Committee on Maternal Welfare and The Committee on Child Welfare. The new committee on child welfare was appointed by Dr. Nesselrode, February 1940.

A sub-committee, headed by Dr. Howard Clark, has cooperated throughout the year with the Kansas State Board of Health in placing incubators where need was found to exist.

This committee went on record and requested from the Kansas State Board of Health that a method be devised, wherein, Wasserman and Kahn examinations could be required on every pregnant woman.

This committee is pleased to report that the new form of reporting blanks on maternal deaths is now in operation. This is certain to be of great value in compiling statistics for future study.

The committee re-approved the rules for conduct of obstetrical cases, and voted to re-bulletinize the various counties on their value in lowering maternal morbidity and mortality. It was also voted that the rules be presented before the meeting of the Kansas Hospital Association.

The subject of the Kansas post-graduate courses in obstetrics was discussed and a sub-committee appointed to study and outline future courses.

A sub-committee consisting of Dr. L. A. Calkins, Dr. C. O. Meredith and Dr. H. R. Ross, was appointed for the purpose of considering the possibilities of conducting mother's training classes throughout the State on pre-natal and post-natal subjects.

The following report was presented by Robert H. Moore, M. D., Chairman of the Committee on Pharmacy:

TO: THE HOUSE OF DELEGATES

Your Committee on Pharmacy has been comparatively inactive this year. We will hold our first meeting during the Society meeting in May.

There has been little business of importance for this committee in as much as some members were in the Western part of the state, your chairman thought the expense of these men coming in was too great for the business we had to transact.

This committee has for the past year been studying the following:

1. Drug dispensing problem.
2. Counter prescribing.
3. Barbiturate problem.
4. Kansas Pure Food and Drug Laws.

There will undoubtedly in the coming session of the legislature be introduced legislation on barbiturates. We the committee feel that some legislation on this problem is necessary and desirable, but certainly

must be a comprehensive bill or it will be of little or no value at all.

The Kansas Pure Food and Drug Laws have not been revised or kept up to date and certainly they are most antiquated. The committee feels that the Pure Food and Drug Laws should be revised so as to confirm as nearly as possible the recently enacted National Pure Food and Drug Laws. No doubt that your committee for 1940-1941 will have considerable more to do because of it being the legislative year.

As chairman, I wish to thank every member of this committee for his continued support.

The following report was presented by John M. Porter, M. D., Chairman of the Committee on Scientific Works:

TO: THE HOUSE OF DELEGATES

Your Committee on Scientific Work, of which the constitutional secretary is ex officio chairman, has come through a year of transition, leaving much to be desired but having made a start in some small ways. At the instigation of and under the stimulation of Dr. C. C. Nesselrode, the committee at the beginning of the year undertook the following with the idea of transforming the group from one of more or less inactive councillorship into one of actual accomplishment. The fact that many of these goals as outlined by your president were not reached in the first year is no cause for discouragement but rather a stimulus for the future.

1. Cooperation with the Committee in charge of the Annual Meeting of the State Society. This was one of the original purposes of the committee but had been allowed to lapse in recent years as the excellent local organizations took over more and more of the responsibility of the State meetings. After considerable discussion with the experienced Wichita group it was decided this year to limit our activities to the promotion of that part of the program reserved for members of the State Society. To this end, after much correspondence, several bulletins and much work by various councilors, ten excellent presentations were offered to the Program Committee and from this list were chosen the speakers from within the state. As the committee grows in experience in this regard, it is hoped that some supervision of the state programs can be arranged with a view toward continuity throughout the years and the avoidance of over-emphasis on any one topic or phase of medical practice. In other words a state-wide group with some members holding over from year to year should be able to advise and co-operate with the yearly committees in charge of the program. There is also the possibility that through its title and make-up, the committee could serve as a buffer in rejecting sub-standard commercial exhibits for the state meetings and thus avoid possible local embarrassment.

2. The promotion of refresher and post-graduate courses on a county, district, and state-wide basis. Owing to the excellent work already scheduled by the committees on Venereal Disease, Maternal and Child Welfare, and Control of Cancer it was deemed best not to add anything to the present schedule but rather to co-operate with these various committees, the Kansas State Board of Health, the Medical School, and the local sponsors in the very fine schedules they have outlined. Some little work has been done in seeing that

these various groups did not overlap and in feeling out the sentiment of various districts toward the amount or number of post-graduate courses they desired. With another year's experience and particularly with an early start before the other groups have made definite plans it should be possible to coordinate the fine work of the Board of Health, the Medical School, and the various committees in this respect. Cooperation was also attempted with the rather elaborate post-graduate course sponsored by the Committee for the Study of Heart Disease and rather indefinite plans laid for a repetition of this full-time course supported by individual fees in some other line of medicine.

3. The dissemination of information by means of the Journal of all new and important developments in the scientific side of medicine. This of course is a large order but when it is remembered that the members of the State Society receive the Journal of The Kansas Medical Society and no other non-commercial publication, its importance is obvious. Arrangements have been made with one pharmaceutical house for a supply of a new preparation for intensive clinical study by one of the qualified men of the society and this investigation is now going on and will be reported in the near future. Other companies have been contacted along the same line. The cooperation of the School of Medicine in this matter has also been promised but the past year has seen no new developments comparable to sulfapyradine, shock treatment of the psychoses, liver therapy, and the like. It is hoped that in the future a competent group can be assembled to report these through the Journal.

4. The development of liaison between the State Board of Health and the profession at large concerning epidemics, preventive medicine, etc. At a conference with Dr. Helm it was agreed that the bulletins sent to practically all practitioners in Kansas should on occasion have special inserts prepared or suggested by the Committee on Scientific Work. The Board has been more than anxious to cooperate in this regard and the fact that more has not been accomplished has been due more to lack of experience than anything else.

To carry out this extensive program the committee was enlarged this year but even so the amount of work involved in all these phases has been more than could be accomplished as well as your committee would like. As the committee gains experience and a better division of labor becomes possible there is no reason why more of these objectives should not be attained.

In addition to this definite program, much work of a more vague nature has been done. Several worthwhile papers have been submitted to the Editorial Board of the Journal for publication. A start has been made on outlining speakers from various communities in the State with the idea of arranging exchange programs with other societies. Much effort has been put forth in conjunction with the Committee on Pharmacy and the Medical School in trying to secure delegates from the Society and the school to the 1940 pharmacopoeial convention. The State has been fairly well surveyed regarding desires of the membership regarding graduate work. Opinion on further specialization by sections at the State meeting, etc.

In summary, the Committee on Scientific Work has undertaken a large program of activity, has been able to accomplish a little, and has plans for much for the future. Cooperation and tolerance is asked from the membership as a whole.

PROFESSIONAL PROTECTION

SINCE 1899
SPECIALIZED
SERVICE

A DOCTOR SAYS:

"While one might feel secure that the facts and testimony would be sufficient to convince a jury, still juries are only juries, and like the weather they sometimes will fool you."

THE

MEDICAL PROTECTIVE COMPANY

OF FORT WAYNE, INDIANA

WHEATON, ILLINOIS

GREETINGS

to

THE

KANSAS MEDICAL SOCIETY

at Its

81ST ANNUAL SESSION

INNES DRY GOODS

121 S. Broadway

3-2281

IT'S EASIER TO WALK DOWNHILL . . .



And just as it's easier to walk downhill, it's easier to see with plenty of light. Trying to see with poor light is the hard way . . . the uphill way . . . and you pay for it with eye-strain, headaches, and loss of efficiency.

You, as a doctor, know the importance of good light to your eyes. And you know the impossibility of judging intensity and quality of light. So let one of our lighting specialists prescribe for you. He has the instruments necessary for measuring light accurately and the training to prescribe the curative for bad seeing conditions. There is no charge or obligation. Just call or write.

OFFICES AT

Wichita—Newton—El Dorado—Arkansas City—Pittsburg—Independence

KANSAS ^{CAS} AND ELECTRIC COMPANY

Electricity
is Clean

The following report was presented by Philip W. Morgan, M. D., Chairman of the Committee on Study of Heart Disease:

TO: THE HOUSE OF DELEGATES

The committee's major objective is to foster anything which will assist the members of the Society in handling cardiovascular problems. The Electrocardiographic census of Kansas, the study of Vital Statistics records and the results of a questionnaire from a group of representative hospitals in Kansas as well as a study of similar work done in other states were all reported a year ago at this meeting.

The outstanding and most important project referred to last year, namely: The work of collecting data based on the Criteria of the American Heart Association on the incidence of the various types of heart disease occurring in Kansas, is progressing satisfactorily. Thirty men over the State familiar with this criteria have volunteered to study their own reports and each list his last hundred cardiovascular diagnoses. This data when completed will represent the only study of its kind in the country, and the idea has attracted favorable attention from the American Heart Association. The cooperating physicians have organized "The Kansas Heart Association of The Kansas Medical Society" and this group along with any other interested physicians plan an informal seminar meeting in the afternoon of May 13th in Wichita.

The committee through a questionnaire from the central office to all county secretaries secured a list of sixty men who it was said were offering their communities electrocardiographic facilities or who had otherwise shown particular interest in heart disease. These men were asked if they were interested in contributing to secure an outstanding teacher to come to some centrally located center and present a five day course in advanced cardiology and electrocardiography. The committee recommended that thirty be the maximum enrollment for the course. By several weeks before the date of the course thirty-four men had asked to take the course. Though several men were unable to avail themselves of the places saved for them the course was held in Emporia, in October and was attended by twenty-six men and those in attendance were unanimous in approving the idea and especially the instructor in the course. Doctor David Scherf of the New York Medical College, Flower and Fifth Avenue Hospitals was the instructor.

The committee hopes to offer in a booth at the annual meeting in Wichita information which has particular value to physicians in Kansas.

During the coming year the Committee plans to continue its work on the incidence of the various types of heart disease; because of numerous requests to assist in arranging for a similar course to the one held last year; to arrange for regional and for county society speakers; and to offer any data at its disposal to any inquiring member of The Kansas Medical Society.

TO: THE HOUSE OF DELEGATES

The following report was presented by Arthur D. Gray, M. D., Chairman of the Committee on Venereal Disease:

TO: THE HOUSE OF DELEGATES

The Venereal Disease program has been carried on

through the past year with gratifying results. Three major factors are perhaps worthy of comment.

First, the third venereal disease post-graduate course under the auspices of The State Medical Society and the State Board of Health, was offered late in 1939 and early in 1940. As far as possible new localities were selected for the meetings, and a number of men registered who had not previously found it possible to attend. Judging by the voluntary comments, both written and verbal, the V. D. courses are being well received.

Second, four new venereal disease clinics are now in operation and others are under consideration. In each instance the clinics have been established only after an official request by the local county medical society and after they have selected a director from their own number. Reports indicate that not only are the clinics running smoothly and accomplishing definite results, but that they are doing so in a manner satisfactory to the local physicians.

Third, more cases of syphilis are being reported to the Kansas State Board of Health. It is felt that this is the result of the excellent cooperation on the part of the medical profession in Kansas in response to the suggestions made by the speakers who have given the venereal disease lectures through the state. The marked increase in the number of cases reported is shown by the following figures:

Case reported: 1936	962
1937	1962
1938	2119
1939	Over 3000

It is obvious that syphilis has not increased to this extent in the State, and therefore these statistics demonstrate a very fine effort on the part of the physicians to improve our records, and this in turn would appear to show a growing interest in venereal disease control.

NEWS NOTES

OSTEOS LOSE NARCOTICS

The United States Circuit Court of Appeals, Tenth Circuit, handed down an opinion in the case of Kansas State Osteopathic Association v. W. H. Burke, Collector of Internal Revenue, on April 8. The opinion which is reproduced below held that osteopaths in Kansas cannot use, sell or distribute narcotic drugs for any purpose. The case had previously been tried before Judge Richard L. Hopkins of the United States District Court for the District of Kansas, and held in favor of the osteopaths on the basis of an injunction instructing the Collector of Internal Revenue to issue narcotic stamps to them. The opinion of the Circuit Court of Appeals dissolves that injunction and makes it impossible for osteopaths to re-register for narcotic stamps or to purchase prescription forms. The case was tried on behalf of the Government by Mr. S. S.



Hervey C. Parke, George S. Davis, Samuel P. Duffield—out of the dreams and struggles of these founders has come the Parke, Davis & Company of today.

They left a formula for greatness

In the lives of Parke, Davis, and Duffield, two characteristics stand out. Restlessness—a zeal for original investigation, demanding extravagant expenditures for exploration and research which time and time again jeopardized the very life of the infant company. Yet in equal measure, Patience—a zest for taking infinite pains in the direction of safety, potency, uniformity, pharmaceutical elegance.

The Parke, Davis & Company of today reflects, we believe, those qualities which so clearly characterized the men who founded the organization.

From their restlessness has been inherited the spirit of research—a compelling desire for better methods and more effective agents for combatting disease. And from their patience has come the habit of leaving nothing undone which can contribute to the high quality of products bearing the Parke-Davis label.

PARKE, DAVIS & COMPANY



PIONEERS IN RESEARCH ON MEDICINAL PRODUCTS

Alexander, United States District Attorney for Kansas.

"Vaught, District Judge, delivered the opinion of the court.

This is a suit instituted by the Kansas State Osteopathic Association, Incorporated, the members of the Board of Trustees of such association, and certain duly licensed and practicing osteopathic physicians in the State of Kansas, against the Collector of Internal Revenue in that state, to enjoin the collector from refusing to issue and reissue narcotic licenses to osteopathic physicians within the state, and to direct and command him to issue and reissue them upon their expiration, and to issue proper permits and stamps to procure narcotic drugs for use by such osteopathic physicians in the practice of their profession, as provided by the laws of the United States and of the State of Kansas. The court granted the writ, and the collector appealed.

The parties herein will be referred to as they appeared in the trial court.

The defendant answered, pleading the Harrison Narcotic Act, the statutes of Kansas and the interpretations thereon by the Supreme Court of the State of Kansas, and alleged that under said laws he had no authority to issue the licenses prayed for, and asked that the cause be dismissed.

"On or before July 1 of each year, every person who imports, manufactures, produces, compounds, sells, deals in, dispenses, or gives away opium or coca leaves, or any compound, manufacture, salt, derivative, or preparation thereof, shall pay the special taxes hereinafter provided. Every person upon first engaging in any of such activities shall immediately pay the proportionate part of the tax for the period ending on the following June 30.

(d) Physicians, dentists, veterinary surgeons, and other practitioners. Physicians, dentists, veterinary surgeons, and other practitioners, lawfully entitled to distribute, dispense, give away or administer any of the aforesaid drugs to patients upon whom they in the course of their professional practice are in attendance, \$1 each year or fraction thereof, during which they engage in any of such activities."

The plaintiffs contend that since it is the duty of the collector to issue licenses to distribute, dispense, give away or administer narcotic drugs, to physicians in the State of Kansas and that since the laws of Kansas define those engaged in the practice of osteopathy as "physicians," that it is the duty of the collector to recognize osteopathic physicians as "physicians."

The issue is whether or not osteopathic physicians, under the laws of Kansas, have the right to administer narcotic drugs, and must be determined by the statutory law of Kansas, as interpreted by its Supreme Court. *Perry v. Larson*, 104 F. (2d) 728.

Section 65-615 G. S. Ann. 1935 provides:

"Opium or coca leaves; penalty for keeping. It shall be unlawful for any person to keep or have in his possession or under his control, for personal use or otherwise any opium or cocoa leaves of any compound, salt, derivative or preparation thereof, and such possession or control shall be presumptive evidence of a violation of this section; or to permit another to have or keep or use any of said drugs on any premises owned or controlled by him, or to sell or give away or furnish any of said drugs to another, except physicians, dentists, veterinary surgeons, registered nurses, or registered pharmacists as hereinafter provided * * *"

The Kansas statutes also provide under what terms and conditions drugs and narcotics may be dispensed but limits the dispensing or distribution of said drugs to a patient to "a physician, dentist, or veterinary surgeon registered under the laws of the State of Kansas in the course of his professional practice only." The statutes also provide for a Board of Examiners, who shall examine and license persons intending to practice medicine or surgery, and make provision for requirements as to the course of study, the examination, et cetera.

They also provide for a Board of Examiners, who shall examine and license all persons desiring to practice osteopathy.

Section 65-1005 G. S. Ann. 1935 provides:

"Any person shall be regarded as practicing medicine and surgery within the meaning of this act who shall prescribe, or who shall recommend for a fee, for like use, any drug or medicine, or perform any surgical operation of whatever nature for the cure or relief of any wounds, fracture or bodily injury, infirmity or disease of another person, or who shall use the words or letters 'Dr.', 'Doctor,' 'M.D.,' or any other title in connection with his name, which in any way represents him as engaged in the practice of medicine or surgery or any person attempting or treat the sick or others afflicted with bodily or mental infirmities, or any person representing or advertising himself as any means or through any medium whatsoever, or in any manner whatsoever, so as to indicate that he is authorized to or does practice medicine or surgery in this state, or that he is authorized to or does treat the sick or others afflicted with bodily infirmities, but nothing in this act shall be construed as interfering with any religious belief in the treatment of diseases."

And the same act provides a penalty for practicing medicine or surgery without a certificate. The same statute, (65-1201 G. S. Ann. 1935 passed in 1913) provides for the examination of persons desiring to practice the profession of osteopathy.

"Any person not now a registered osteopathic physician of this state, before engaging in the practice of osteopathy in this state shall make application to the board of osteopathic examination and registration, on a form prescribed by the board, for a certificate to practice osteopathy, ***. If such examination is passed in a manner satisfactory to the board, then the board shall issue to said applicant a certificate granting him the right to practice osteopathy in the State of Kansas, as taught and practiced in the legally incorporated colleges of osteopathy of good repute."

This case largely turns upon the definition of physician and osteopathic physician, the plaintiffs contending that the term physician embraces osteopathic physician and, therefore, when the statute refers to physician, it includes osteopathic physicians. The defendant, however, contends that the term physician is a definite term, not only recognized in medical science but by the Legislature of Kansas as well, as referring specifically to those authorized to practice surgery and medicine; that under medicine, is included the study, knowledge, and administration of drugs for the relief of pain and for their curative value as affecting any disease or affliction of the body; that surgery has a definite and distinct meaning—manual operation; that osteopathy has been defined by the laws of Kansas as "a method of treating diseases of the human body without the use of drugs, by means of manipulation applied to various nerve centers, chiefly those along the spine, with a view to inducing free



W. E. ISLE COMPANY
2nd FLOOR RIEGER BLDG.—1121 GRAND AVE.
TELEPHONE VICTOR 2350
KANSAS CITY, MISSOURI

ISLE BUILT LIMBS

*Approved by the American College of
Surgeons*

**COMFORT
CORRECT POSTURE
SATISFACTION**

GREETINGS

TO THE KANSAS MEDICAL SOCIETY

Plan on visiting our Home Office
and Laboratories while in Wichita.

**THE
ARCHER-TAYLOR LABORATORIES**

Main at Pine Street

PHARMACEUTICAL PRODUCTS FOR KANSANS

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM
Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the
A.M.A.

When You Prescribe a Support

Specify . . . **CAMP**

We carry a full line of Camp Supports for men and women.
They are highly and widely approved because of their

**Scientific Construction,
Light Weight—Comfort,
And Reasonable Price**

Our staff has been skilfully trained at Camp Schools to select
and fit the most efficient support for each individual purpose.

YOURS FAITHFULLY

For more than twenty-five years the CAMP organization has worked
closely with physicians to embody in its supports the findings of the
medical and surgical research.

The resulting patented features have justified professional confidence in
CAMP SUPPORTS

for prenatal, postnatal, postoperative, hernial, orthopedic, visceroptotic
and other conditions including normal obesity.

Every prescription is faithfully and accurately executed by our expert
surgical fitters, trained by the CAMP organization.



Mary M. McCormick, in charge

of

Authorized Camp Service

WALKER BROS.

DRY GOODS CO.

129 North Main

Phone 5-2671

circulation of the blood and lymph, and an equal distribution to the nerve forces."

The Act of 1931, giving the right to practice osteopathy in the State of Kansas "as taught and practiced in the legally incorporated colleges of osteopathy of good repute," provides the basis upon which the plaintiffs seek relief. It is necessary, therefore, to determine just what is meant under the laws of Kansas by the term "physician" and by the term "osteopathic physician."

In *State v. Johnson*, 84 Kan. 411, 114 Pac. 390 (1911), the Supreme Court of Kansas dealt with this very question. It defined osteopathy, medicine and surgery, and said:

"Osteopathy is carved out as a separate department, and registration and license are required, while its practitioners are prohibited from giving medicine and performing surgical operations; that is, from practicing medicine and surgery as distinguished from osteopathy. But 'medicine and surgery,' which the appellee is charged with attempting to practice, by common use and adjudged meaning cover a wide portion of the domain of healing, and may and should be held to cover the case of one who, not claiming to be a physician or surgeon, really practices osteopathy under another guise without possessing the qualifications required of the osteopath. 'Osteopathy' is defined (Webster's New International Dictionary) as: 'A system of treatment based on the theory that diseases are chiefly due to deranged mechanism of the bones, nerves, blood vessels, and other tissues, and can be remedied by manipulations of these parts.' It has been judicially defined as: 'A method of treating diseases of the human body without the use of drugs, by means of manipulations applied to various nerve centers—chiefly those along the spine—with a view of inducing free circulation of the blood and lymph, and an equal distribution of the nerve forces. Special attention is given to the readjustment of any bones, muscles, or ligaments not in the normal position.' Words and Phrases Judicially Defined, vol. 6, p. 5070. 'Medicine' is defined (Webster's New International Dictionary) as: 'The science and art dealing with the prevention, cure or alleviation of diseases; in a narrower sense, that part of the science and art of restoring and preserving health which is the province of the physician as distinguished from the surgeon and obstetrician.' He defines 'surgery' as: Art or practice of healing by manual operation; that branch of medical science which treats of mechanical or operative measures for healing diseases, deformities, or injuries."

"The Legislature has by the statutes referred to treated osteopathy as a separate department and covered all the other branches of the healing art by the term 'medicine and surgery.' As new schools of practice come into favor, their following must possess the requirements for the practice of medicine and surgery or prevail upon the Legislature to make separate provision for them as it has done for the osteopath."

In 1925 the Supreme Court of Kansas again had occasion to consider the same question and in that case, *State ex rel v. Eustace*, 117 Kansas 746, 233 Pac. 109, the court said:

"We must look to the law books for the definition of the term. 3 Words and Phrases, Second Series 803, defines osteopathy as: 'A method of treating diseases of the human body without the use of drugs, by means of manipulation applied to various

nerve centers, chiefly those along the spine, with a view of inducing free circulation of the blood and lymph, and an equal distribution of the nerve forces. Special attention is given to the readjustment of any bones, muscles, or ligaments not in the normal position. It is that method of the healing art accomplished by a system of rubbing or kneading the body."

"Osteopathy when practiced by a physician or surgeon as is defined in section 65-1005 may be and probably is a part of the art of science of healing, but the practice of osteopathy, while it may be a part of the art of healing, is not comprehended within the term 'practicing medicine,' nor within the term 'surgical operation' as used in section 65-1005 of the Revised Statutes. Section 65-1508 of the Revised Statutes, providing that nothing in the optometry act shall be construed as preventing regular registered physicians and surgeons from practicing optometry, does not include those who are registered to practice osteopathy."

Later in 1938, in *State ex rel. v. Gleason*, 148 Kan. 1, 79 Pac. (2d) 911, 917, the Supreme Court of Kansas again reviewed this question and said:

"They argue that the intentional removal of this restriction on osteopaths contained in the 1901 statute indicates a legislative intent to authorize osteopaths to administer drugs and perform operations in surgery without restriction. It seems clear the Legislature intentionally omitted the prohibitory phrase contained in the 1901 act from the act of 1913 (Ch. 290), but it does not follow that thereby the Legislature intended to confer unrestricted authority on osteopaths to administer drugs and perform operations in surgery. Considering the fact that surgery in its primitive and broadest sense includes adjustment of bones, muscles, ligaments and nerves by manual operation, and that skill in doing so is taught in osteopathic schools and colleges, and occupies a major place in the science or system of osteopathy, and in the practice of osteopathy, the prohibition against osteopaths performing operations in surgery contained in the 1901 act was, at its best, an inaccurately used expression, and should have been omitted for that reason alone. The science or system of osteopathy, generally speaking, strongly opposed the use of drugs as remedial agencies in treating the sick, afflicted, or injured, and osteopathic schools and colleges of good repute contained no course for the study of materia medica, hence, there was no real occasion to prohibit osteopaths from using drugs, since they made no claim or pretense of doing so, nor did they study to qualify themselves for such use. Broadly speaking, thereis was a drugless system of healing. Surgery, as well as obstetrics (*Yard v. Gibbons*, 95 Kan. 802, 149 P. 422), and each of the other subjects in which osteopaths were required to take an examination, were taught in the osteopathic schools and colleges of good repute, in harmony with the osteopathic theory or system of healing, and not as taught in the medical colleges and universities. So the word 'surgery,' as used in this statute, meant, in the main, surgery by manual manipulation. The general use of a knife or other instruments in surgical operations was regarded as unnecessary and opposed to the osteopathic system of treatment. Apparently the legislative intent of the Act of 1913 (Ch. 290) was to recognize the system of osteopathy as then taught in its schools and colleges

TO AID YOU IN DIAGNOSIS AND TREATMENT OF DISEASES OF THE SKIN AND HAIR

DISEASES of the Skin

The authors of this volume believe that the time has come to tie the descriptions and concepts of disorders of the skin with general medicine and biology. Therefore, the tenth Edition of "Diseases of the Skin" emphasizes the viewpoint that skin lesions are frequently the symptoms of internal diseases, thus opening a new vista in medicine.

Another outstanding feature of this edition is its illustrative material—1,453 photographs to aid you in the diagnosis of puzzling cases, and the authors' interpretations of these pictures to further assist you. The book has been rearranged; new material, illustrations, and bibliographic entries have been added, making the volume a comprehensive "atlas" of skin diseases.

"Diseases of the Skin" covers: Anatomy; Embryology; Physiology; General Etiology; General Symptomatology and Pathology; General Diagnosis; Treatment; Classification: Class 1—Inflammations, Class 2—Purpuras, Class 3—Metabolic Dermatoses, Class 4—Atrophies, Class 5—Neuroses, Class 6—Anomalies of Pigmentation, Class 7—Malformations, Class 8—New Growths, Class 9—Diseases Due to Viruses, Class 10—Diseases Due to Bacteria, Class 11—Diseases Due to Higher Fungi, Class 12—Diseases Due to Animals, Class 13—Diseases of the Appendages, Class 14—Diseases of the Mucous Membrane; Index.

By R. L. SUTTON, and R. L. SUTTON, Jr., 1,549 pages, 1,452 illustrations, 21 color plates. Price, \$15.00.

Diagnosis and Treatment of Diseases of the Hair

This new book supplies information which has not been easily available before, information on the diagnosis and treatment of hair conditions which will allow you to give your patients prompt and complete relief. The subject is discussed with reference to etiology, pathology, and symptomatology, and minute instructional details are given for treatment. In addition, special emphasis has been placed on the differential diagnosis of the various diseases and their possible relationship to general health.

Contents: I. Anatomy, Physiology, and Hygiene of the Hair and Scalp, with a Classification of the Various Diseases; II. Disturbances in the Pigmentation of the Hair; III. The Atrophies of the Hair; IV. The Hypertrophies; V. Inflammatory Diseases of the Hair Follicles; VI. Other Diseases of the Scalp Which Influence the Development and Structure of the Hair; VII. The Relation of the Endocrine Glands to the Distribution and Growth of the Hair; VIII. Oddities of the Scalp.

By LEE McCARTHY. 700 pages, 291 illustrations. Price, \$8.50.

The C. V. MOSBY COMPANY
3525 Pine Blvd., St. Louis, Mo.

KMJ 4-40

Gentlemen: Please send me the following book (s), charging my account: _____

Dr. _____

Address _____

of good repute, and to authorize its practice by those who believed in and conformed to its teachings. Our Legislature recognized that there is a broad field for the use of such a system of the healing art. If as is suggested by counsel for defendant, osteopathic schools and colleges of good repute, and those who practice osteopathy, have abandoned their fundamental theory that surgery, in the main, should be confined to manipulation without the use of the knife and other instruments, that fact never has been recognized by the Legislature or the courts of this state."

"Are osteopathic physicians in Kansas licensed (a) to administer drugs and narcotics and practice drug therapy, and are they licensed (b) to perform surgery under the provisions of the osteopathic practice act? Generally speaking, the answer to the first part of this question (a) must be in the negative, insofar as such drugs are given as remedial aids. To the second part of the question (b) the answer must be yes, if confined to surgery as the same was taught and used as a part of the osteopathic system of healing,—which in the main was by manipulation—and the answer should be no, if it extends beyond this into the general field of operative surgery with surgical instruments. In this connection the briefs put to us specific questions, such as: May one licensed to practice osteopathy, under stated circumstances, administer a simple drug, or a specific drug, for remedial purposes, or use surgical instruments? We are not called upon to interpret our statutes. We have no difficulty in finding that our Legislature recognized the practice of medicine and surgery as one thing, and the practice of osteopathy as another, and that it regarded both schools of healing as having merit, and the practice of each was authorized."

Much of the brief of the defendant and the argument before this court involved the meaning of the term "remedial aids," and the plaintiffs contend that remedial aids do not include what might be designated as palliative aids or narcotics administered solely for relieving the patient of pain.

We might then condense the plaintiffs' contentions to two propositions. First, the provision of the statute, "the right to practice osteopathy in the State of Kansas as taught and practiced in the legally incorporated colleges of osteopathy of good repute" and, second, "remedial aids."

As to what was taught in schools of osteopathy of good repute in 1913 is a matter of fact. Numerous witnesses, including osteopathic physicians, testified that the use of narcotics was taught in the schools of osteopathy and the osteopathic physicians used narcotics in their practice; that this was the practice in the schools and among osteopathic physicians in 1913. It was also testified that, in the osteopathic college at Kirksville, Mo., perhaps the leading osteopathic college in the United States, the students were taught not only the principles of osteopathy as that term is generally understood, but they were also taught the use and effect of drugs, of surgery, of optometry, and all other kindred branches of medicine.

In the Gleason Case, *supra*, Gleason was an osteopathic physician and he contended that he had the right, under the act, to practice anything that was taught in the osteopathic college. The Supreme Court held that he had no authority to practice surgery and optometry, and that he had no right to use drugs as remedial aids.

What are we to conclude then that the Legislature

meant by "osteopathy as taught and practiced in the legally incorporated colleges of osteopathy of good repute?" Numerous textbooks, catalogues, magazines and medical treatises were referred to in the evidence and extracts from these various publications were admitted in evidence. Certainly "osteopathy" had a definite meaning in 1913.

Referring to the twenty-second annual catalogue, 1914-1915, American School of Osteopathy, Kirksville, Mo., we quote:

"Instead, as in the old school medical college, of studies relating to drugs and their administration, the osteopathic student has Principles and Practice of Osteopathy and Osteopathic Diagnosis.

"Though the same textbooks are used in many of the classes in the osteopathic schools that are used in the same classes in the medical schools, different stress is laid upon different studies and relatively different importance given and time devoted to the various parts of the same subject."

"The subjects taught in osteopathic schools are necessarily presented in a manner entirely different from those of medical schools because the principles of the two schools are fundamentally different. Osteopathy is based upon the belief that health depends upon the structural integrity of the body, and that the disease is caused by bony or muscular lesions."

"Medicine is based upon empiricism, except in the cases where disease is caused by germs. The osteopathist believes that health can be restored by correcting the anatomical lesions. The medical man has learned by experiment that certain nerves can be affected by certain drugs, so, to cure disease he introduces these into the stomach, the blood becomes impregnated with the drugs, it is carried to the affected nerves as well as to every other nerve in the body. This is why the osteopathist is so strongly opposed to drugs—they may stimulate or inhibit the desired nerve but what do they do to all of the rest?"

"The medical student has to study materia medica, the nature and effects of the drugs used in his practice. This the osteopathic student does not have to learn but he has instead the principles and practice of osteopathy."

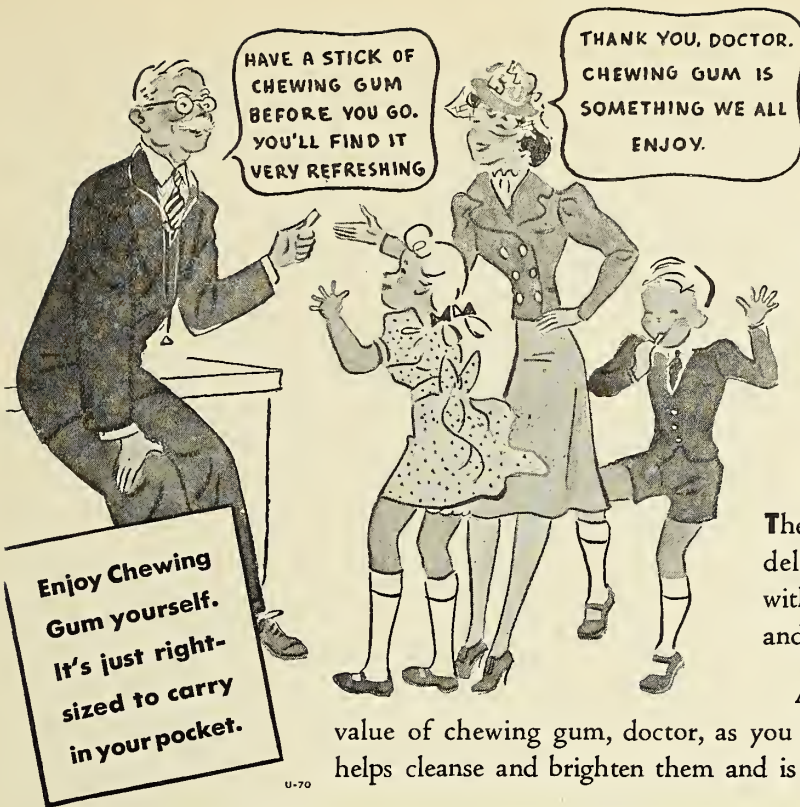
The Report of A. O. A. Committee on Education (Jrl. A.O.A. May, 1915, p. 465) contains the following statement:

"The teaching of materia medica and pharmacology in an osteopathic college is a detriment rather than a benefit to the osteopathic student regardless of personal point of view of the instruction; the osteopathic graduate from a school that teaches much and straight osteopathy is better fixed to promulgate and advance the science of osteopathy than the graduate who has a smatter of drugs, even though received from a corps of instructors who deprecate its use."

From an article by A. L. Evans, Editor A.O.A. Osteopathic Magazine (Jrl. A.O.A. October, 1913, p. 81) in speaking of osteopathy, the editor said:

"It should no longer seek to evade its responsibility along these lines. It should take its part in the fight against medical tyranny. It should continue to war against the drug curse, the evils that come from drugs, whether patented or prescribed."

In an address by Dr. A. T. Still at the 1913 Annual Meeting of A. O. A. (Jrl. A.O.A. August, 1913, p. 739),



Doctor—
here is how
CHEWING GUM
helps you send
your patients away
with a good taste
in their mouths

The offer of a wholesome stick of delicious Chewing Gum along with a cheery "Goodbye" literally and figuratively does the trick.

And aside from the good will value of chewing gum, doctor, as you know, it exercises the teeth, helps cleanse and brighten them and is a refreshing pleasure. Try it.

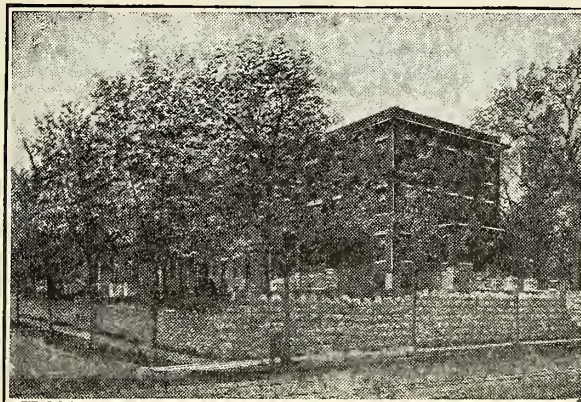
The National Association of Chewing Gum Manufacturers, Rosebank, Staten Island, New York

THE MAJOR CLINIC ASSOCIATION

3100 EUCLID AVENUE

KANSAS CITY, MISSOURI

A Well
Equipped
Institution
for the
Nervous and
Mental
Diseases and
Alcohol,
Drug and
Tobacco
Addictions



Beautiful
Location
Large,
Well Shaded
Grounds,
Spacious
Porches,
All Modern
Methods for
Restoring
Patients to a
Normal
Condition

HERMON S. MAJOR, M.D.
Medical Director

HENRY S. MILLETT, M.D.
Associate Medical Director

HERMON S. MAJOR, JR.
Business Manager

this distinguished osteopathic physician said, quoting from the report:

"That thirty-nine years ago he had quite the practice of drugs and had sworn that from that day on he would stand by the Divine Architect and study His chief creation—Man."

And in an editorial in the Journal A. O. A. June, 1913, p. 605, it was said:

"Osteopathy has demonstrated that health can be restored and maintained without drugs."

In the same Journal for January, 1913, p. 292, an editorial stated:

"The difference between the two (medicine and osteopathy) was clear cut and distinct in the public mind. If the public wanted drug medication, it went to the drug doctor. If it had tired of this and believed there might be some truth in the new way which emphasized the minute adjustment of the body structures and environment as a means of restoring function and co-ordination, if not indeed a restoration of degenerative changes, it sought this new school."

In the same Journal in July, 1913, p. 698, referring to the student, an article contained this statement:

"The more thoroughly he knows even drugs used in ordinary medication, the more horrible do the dangers of drug therapy show themselves in his opened eyes."

An editorial in the same Journal, 1915, p. 669, referring to Dr. A. T. Still, said:

"The man lives and daily refutes the statement that he countenances drugs in any form and for those who cannot hear that voice there is the printed word

from which there can be no appeal. No one can begin the study of osteopathy under a mis-apprehension; no one can later in life go into a trance and find that osteopathy is something different from what Dr. Still taught and is still teaching. Incorporated in the by-laws of an osteopathic society are these words 'practicing osteopathy as taught and practiced by Andrew Taylor Still.'"

George M. Laughlin, President of the Kirksville College, in The Journal of Osteopathy, March, 1937, said:

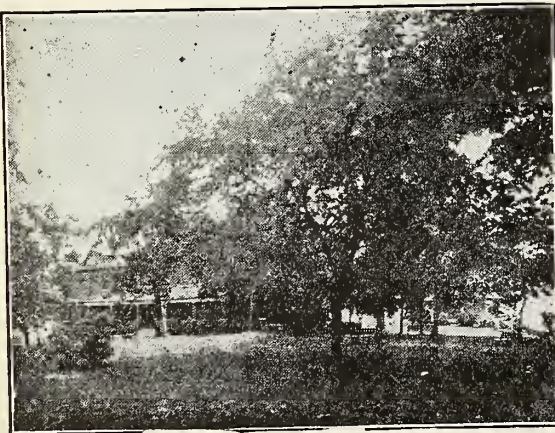
"What I am chiefly alarmed about is the tendency for so many of our osteopathic practitioners to neglect osteopathic therapy and resort to the use of drugs about which they know little. These practitioners depend largely upon the directions on the bottle for dosage of such drugs and their indications. Hundreds of concoctions are put out under trade names that are in wide use, not by the best trained medical men, but by those, who, if osteopaths, are engaging in a practice not taught by the college here."

These various excerpts from the osteopathic journals and the catalogue from a leading college are set out for the sole purpose of determining what the outstanding members of the osteopathic profession understood, believed and taught as their conception of the term "osteopathy."

The school at Kirksville taught osteopathy; it taught the principles of the various branches of medicine as taught in the leading medical schools of the nation and witnesses testified that they used the same textbooks in the osteopathic college as were used in the leading col-

Grandview Sanitarium

KANSAS CITY, KANSAS, (26th St. and Ridge Ave.)



A High Grade Sanitarium and Hospital of super accommodations for the care of:

NERVOUS DISEASES

MILD PSYCHOSES

THE DRUG HABIT

AND INEBRIETY.

Situated on a 20-acre tract adjoining City Park of 100 acres. Room with private bath can be provided.

The City Park line of the Metropolitan Railway passes within one block of the Sanitarium. Management strictly ethical.

Telephone: Drexel 0019

SEND FOR BOOKLET

E. F. DeVILBISS, M.D., SUPT.

OFFICE, 1124 PROFESSIONAL BLDG., KANSAS CITY, MO.

Luzier Cosmetics and Allergy



For the past few years Luzier's Fine Cosmetics have been exhibited at the National Convention of The American Medical Association and at various of the State Medical Conventions. In our contacts with your profession, Doctor, we have come to the conclusion that your chief interest in cosmetics seems to be with regard to allergy.

We have listened with great interest and no little appreciation to your comments, and we are pleased to find that the majority of you seem to concur in the opinion that, where allergy is concerned, cosmetics are no exception to the general rule that one man's meat may be another man's poison.

That is why we say: "You name the poison, Doctor, and we'll leave it out." By which we mean that in specific cases of allergy or contact dermatitis, where our products may be suspected, we are prepared to provide you with samples of the raw materials present in the suspected products for patch testing. If you find that Mrs. Blank has a positive reaction to this or that ingredient, the chances are we can eliminate the then known offending substance or substances from her Luzier preparations, with the result that she can use them with impunity.

Since Luzier products are selected to suit the individual's requirements and preferences, and a record of each patron's orders is kept on file at our offices in Kansas City, it is usually possible for us to cooperate with your profession in this more or less specialized field.

BEAUTY PREPARATIONS BY LUZIER ARE DISTRIBUTED IN KANSAS BY:

C. B. BURBRIDGE, *Divisional Distributor*
Lincoln, Nebraska

DISTRICT DISTRIBUTORS

EDWIN S. KIMMEL
P. O. Box 269
Concordia, Kansas

SUB-DISTRIBUTORS

LAURA CUDDY
614 Freemont Street
Manhattan, Kansas

MARY I. GREENE
301 West Fifth Street
Junction City, Kansas

MYRA KIMMEL
Concordia, Kansas
P. O. Box 269

ELSIE HARING
10 East Tenth Street
Hutchinson, Kansas

MABLE SEARS
909 E. Elm Street
Salina, Kansas

leges of medicine. But the mere fact that these subjects were taught in the osteopathic college is not evidence that the graduates of that college had a right to practice anything but osteopathy. In many of the leading schools of America today, the principles of communism, facisms and other isms inimical to our form of government are examined and discussed. Not that these schools desire their students to believe these isms but that the students may know what they are and discern between these objectionable theories of government and proper forms of government. These schools insist that they have the right to discuss these various isms under the broad provisions of our Constitution that persons have the right to freedom of speech, religious and political liberty. However, the mere fact that these schools consider these theories cannot be construed as contending that the students have a right to practice the nefarious principles concerning which they had information in college. So, the fact that in an osteopathic college the broad principles of medicine and surgery were investigated and considered, merely for the purpose of giving the student body a knowledge of what those who practice medicine and surgery believe, would not be sufficient to conclude that those licensed to practice osteopathy would have the right to practice medicine or surgery.

Therefore, in 1913 at the time of the enactment of this Kansas law, there was a definite meaning to the term "osteopathy" and that meaning was clearly stated in the opinion by the Kansas Supreme Court as early as 1911, *State v. Johnson*, supra.

With this conclusion and interpretation of these terms by the Supreme Court of Kansas in 1911, can it be

said that the Legislature was in doubt as to what was meant by the terms, osteopathy, medicine, and surgery?

Under the next proposition, the plaintiffs contend that, since the Supreme Court in *State v. Gleason*, supra, stated that osteopathic physicians in Kansas could not, under the law, administer drugs as remedial aids, it by inference said that osteopathic physicians in Kansas could administer drugs not administered as remedial aids. In other words, they argue at length that if a drug be given merely for the purpose of relieving the patient's pain or of causing the relaxation of the muscles until the osteopathic treatment be properly given, then that is a permissible use, under the Kansas statute, of drugs by osteopathic physicians.

All legislation, respecting the use or any limitation on the use of narcotics, is based upon the established fact that narcotic drugs are dangerous. Not that they are poisons within themselves, but are worse than poison. Their excessive use destroys will power, ambition, self respect and in the end, mentality. They make men and women moral perverts. Their influence upon society is most degrading and, therefore, in the importation of narcotics into this country and in their sale, the most careful and rigid regulations have been thrown about their distribution and dispensation.

The responsibility, however, for legally dispensing narcotics is placed upon the legislatures of the various states, and this court is bound by the construction placed upon such an act of the Kansas Legislature by the Kansas Supreme Court.

It may have been that the Supreme Court, in using the term "remedial aid," used an ambiguous term, but

Cook County Graduate School of Medicine

(In affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue every two weeks. General Courses One, Two, Three and Six Months; Clinical Course; Special Courses.

MEDICINE—Personal One Month Course in Electrocardiography and Heart Disease every month, except August. Intensive Personal Courses in other subjects.

FRACTURES & TRAUMATIC SURGERY—Ten Day Intensive Course starting April 22, 1940. Informal Course every week.

GYNECOLOGY—Two Weeks Course April 22, 1940. One Week Personal Course Vaginal Approach to Pelvic Surgery April 8, 1940.

OBSTETRICS—Two Weeks Course April 8, 1940. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks Course starting April 8, 1940. Informal Course every week.

OPHTHALMOLOGY—Two Weeks Course starting April 22, 1940. Informal Course every week.

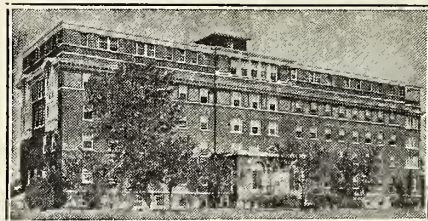
CYSTOSCOPY—Ten Day Practical Course rotary every two weeks. One Month and Two Weeks Courses in Urology every two weeks.

ROENTGENOLOGY—Special Courses X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

TEACHING FACULTY—ATTENDING STAFF OF
COOK COUNTY HOSPITAL

Address Registrar, 427 South Honore Street,
Chicago, Illinois



To the Kansas Medical Society

Greetings!

"We invite you to visit Wesley Hospital during the convention and to inspect a new, modern deep therapy and x-ray equipment."

WESLEY HOSPITAL

WICHITA, KANSAS

ASSURANCE

Assurance that your findings are properly interpreted is a vital factor in maintaining a practice.

Careful, accurate lens grinding, combined with a sincere interest in your success is a necessity not to be overlooked.

QUINTON-DUFFENS OPTICAL COMPANY

Your Local Independent Wholesaler

TOPEKA

HUTCHINSON, SALINA, ST. JOSEPH

SILVER PICRATE

Wyeth

HAS SHOWN A CONVINCING RECORD* OF EFFECTIVENESS IN ACUTE ANTERIOR URETHRITIS

due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
Monilia albicans

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.



Hotel Jayhawk

TOPEKA ~ KANSAS

Main Dining Rooms and Coffee Shop

Air Conditioned and Refrigerated

Many Private Dining Rooms Available for Special Parties

THE MOSBY HOTEL CO.

N. M. Mosby, Pres. & Gen. Mgr.

judges are not skilled in the science of medicine nor in the intricate and delicate shades of meaning of technical terms. It is generally conceded, however, that narcotic drugs have little or no curative qualities and that the sole purpose in giving narcotic drugs is the temporary relief of pain.

In *State v. Gleason*, supra, the court said:

"The science or system of osteopathy, generally speaking strongly opposed the use of drugs as remedial agencies in treating the sick, afflicted, or injured, and osteopathic schools and colleges of good repute contained no course for the study of materia medica; hence, there was no real claim or protense of doing so, nor did they study to qualify themselves for such use. Broadly speaking, theirs was a drugless system of healing." (Emphasis supplied.)

This theory undoubtedly was the basic upon which Legislature proceeded in the enactment of the 1913 statute and the Legislature must have believed that osteopathic physicians considered themselves qualified to relieve pain under their theory of osteopathic therapy without the use of narcotics.

When the osteopaths were licensed to practice their profession, as indicated by statements from the leaders of their profession, their therapy was designed to relieve pain and other illness by means of manipulation and without the use of drugs. Evidently it was upon the strength of that claim that the Legislature granted them the privilege of practicing their profession of osteopathy in the State of Kansas. If they have now found that their osteopathic therapy will not relieve pain, but they must use narcotics or other drugs to secure that end, that need should be addressed to the Legislature rather than to the courts.

We are, therefore, of the opinion that the statutes of Kansas, as construed by the highest court of that state, prohibit the use, sale, or distribution of narcotic drugs for any purpose by an osteopathic physician.

The judgment of the lower court is reversed and the cause remanded with instructions to dismiss the bill."

"Wanted. Salesmen for Medical textbooks on liberal commission basis. Write qualifications to S. B. Debour, Publishers, 25 E. Washington St., Chicago, Illinois."

THE STOKES HOSPITAL

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Med. Dir.

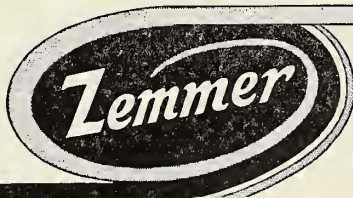
923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray

Always Dependable Products

Pharmaceuticals . . . Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled.



Prescribe or Dispense Zemmer
Write for General Price List

Chemists to the Medical Profession
THE ZEMMER COMPANY

KA-4-40 Oakland Station, Pittsburgh, Pa.

WELCOME TO WICHITA!

MEMBERS OF THE KANSAS MEDICAL SOCIETY

For a pleasant convention stay in Wichita, on May 13, 14, 15, and 16, plan to make The Lassen your headquarters.

350
ROOMS
\$2.50
and up

HOTEL LASSEN

"Wichita's Best Address"

HENRY J. HAYN, Manager

"Famous
For Its
Food"



The Journal Of THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

MAY, 1940

Number 5

ROSE OPERATION REPAIR OF THE TRIGONAL MUSCLE*

(Incontinence in the Female)

F. W. Matassarin, M.D.

Wichita, Kansas

Incontinence of urine in the female is a very common disorder. It is of varying degrees from an occasional dribbling to a complete incontinence. It is more frequent in women of middle age and beyond. These women have usually been told that nothing can be done and have grown accustomed to bearing this discomfort; and unless specifically questioned, do not mention it. In Schaumann's Gynecological Clinic in Philadelphia, ten to twenty per cent of the women entering the clinic have dribbling with complete incontinence in one to two per cent; six to eight per cent being in nulliparous women (Higgins). In ninety per cent of these women a repair of the cystocele and perineum will give the desired relief but the other ten per cent are not relieved of their dribbling and many, though relieved of the incontinence, still have a marked dysuria.

Incontinence must be differentiated from frequency and urgency. In the former, there is no desire to void at the time of the loss.

The severity of the incontinence may be a dribbling of urine on coughing, laughing or straining, to a continual emptying of bladder when patient is on her feet; either of which is very annoying and at times definitely embarrassing.

The cause of this disturbing situation is said by Johnston, of Toronto, to be due to a laceration of the sphincter urethral muscle, and his repair is a dissection and suture of this muscle. Following this type of operation there is at times a loss of small amounts of urine. In 1936, Rose and Royston of St. Louis, showed by cystoscopic examination that the cause of the failure of cures was due to the lack of repair of the trigonal muscle. Thus the main factor in this group of cases is a shearing off of the trigonal

muscle at or near the internal sphincter. Just how this causes symptoms, I will discuss later.

These unfortunate women, besides bearing the discomfort of the dribbling, also, usually have difficulty starting the stream.

The causes of incontinence may be cystocele, laceration of trigonal muscle, relaxation of the vesical sphincter, neurologic lesion, vesico-vaginal fistulae and trigonitis.

Often during the second stage of labor the head is allowed to batter against a full bladder and then as the head descends the bladder is caught between it and the symphysis; thus causing the injury. This may be prevented by catheterizing the woman before delivery and by retracting the bladder up under the symphysis with fingers as the presenting part descends.

The purpose of this paper is to emphasize the fact stressed by Dr. Rose, that in order to get good results in all cases the woman should be cystoscoped preliminary to operation and evidence of laceration of the trigonal muscle noted. Often this being a condition associated with little if any cystocele.

We all know the anatomy of the female pelvis with the importance of the pubocervical fascia being intact and thus maintaining the normal relationship of the cervix and bladder. Very little was known about the anatomy of the trigonal muscle and its relationships until the work of Van Duzen and Looney, of Baylor University.

Figure No. 1 shows the trigonal muscle which is located at the base of the bladder and is a thin sheet of muscle, triangular in shape, bounded above by Mercier's bar and below by the internal urethral orifice. The fibers of this muscle pass through the orifice and loop to attach to the posterior wall of the urethra for a distance of about one-half its length. The thickened lateral margins of this muscle have been named Bell's muscles. The trigonal muscle has a smooth adherent mucous membrane covering which thus gives a smooth firm platform, even if the rest of the bladder wall is in folds.

Normally, we find the ureteral orifices approximately three cm. apart and three cm. above and behind the internal sphincter with the length of the urethra being one to one and a half inches long.

*Presented before the Sedgwick County Medical Society April 18, 1939, Wichita, Kansas.

According to Van Duzen and Looney, the internal sphincter is composed of;

"two portions, namely inner and outer, the most internal fibers form a complete sphincter around the internal orifice of the urethra, and the outer portion of the inner bundle appears to loop partially around the urethral orifice. The outer portion of the sphincter lies external to and somewhat below the inner portion."**

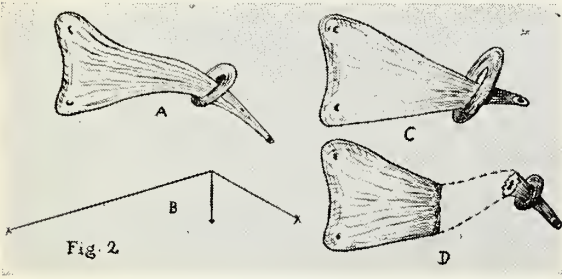


Fig. 1—Anterior view of bladder showing trigone. (From Kelly & Burnam).

These fibers starting on the posterior wall extend on each side of the urethral orifice to its anterior surface.

"The external portion extends down the urethra to the urogenital diaphragm. Thus we have a loop muscle arrangement extending from the internal sphincter bladder surface to the urogenital diaphragm, and it is through this aperture that the trigonal muscle passes to be attached in the urethra."†

Young has shown that the mechanism for the opening of the internal sphincter is the downward pull of the trigonal muscle as it passes in the form of a bow through the weaker arcuate muscle which forms the internal sphincter. In sketch A of Figure No. 2, we see the normal position of the normal trigonal muscle as it passes through the internal sphincter. The diagram B shows the direction of the force and the angle of muscular traction present during voiding. C. demonstrates the normal mechanism for the opening of the internal sphincter, showing the contracting trigonal muscle exerting its downward pull on the internal sphincter, thus opening it. The last sketch, D shows clearly the condition with which we are dealing. The trigonal muscle is seen to be shorn off at a point behind or at the place where it passes through the internal sphincter. From this it is easily seen that any contraction of the major portion of this muscle will in no way effect the relaxation of the sphincter, rather the release of the downward pull will cause a spasm of this circular

muscle on attempt to void; thus resulting in an irritability of the bladder and a delay in starting the stream plus straining. The bladder irritability tends to make more spasm and we thus have formed a vicious cycle.

In these cases where the trigonal muscle is torn, the cystocele, if present, is below Mercier's bar while in those cases where the cystocele is above this bar, usually, any well done colporrhaphy will bring the desired results.

In order that we may diagnose this condition, a cystoscopic examination of the bladder is essential. After introduction of the scope, with the bladder filling slowly with water, the patient is asked to strain down and we note whether or not there is any cystocele present and its relationship to Mercier's bar. It is also important to watch if the sphincter will depress quickly and in unison with the contractions of the trigonal muscle as the patient attempts to void. It is also important to see if there are any contracting torn ends of the trigonal muscle present, if the internal sphincter is relaxed or spastic, if any diverticulæ are present, if there is any trabeculation of the bladder denoting an early case while those of long standing have thin atrophic bladder walls. It is also a good idea to estimate the distance from the

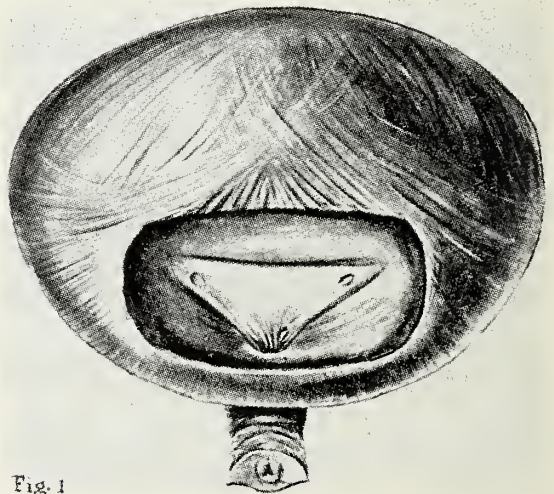


Fig. 1

Fig. 2—Schematic modifications after Van Duzen, from Young's urology. (A) shows the relationship between the trigonal muscle and internal sphincter, (B) shows the angle of traction during voiding, (C) shows mechanism for opening sphincter, (D) shows the result of laceration of the trigonal muscle.

internal sphincter to trigonal floor during height of bladder contraction. This distance is increased in these cases because of failure of sphincter to depress with the main portion of the trigone.

As this is an old syndrome and very bothersome

** Technique of Drs. Rose and Royston ("A New Operation for cystocele").

† Diagrams after Rose & Royston.

there have been numerous operations devised for its cure. Let me list a few of the more outstanding:

The earliest was an injection of paraffin under the mucosa surrounding the urethral orifice to narrow its lumen. Next, was the encircling of the urethral orifice with a silk suture for the same purpose. For the more severe cases an attempt was made to transplant the pyramidalis muscles to form a new sphincter and if this failed the ureters were implanted into the rectum. Up to the time of Rose's paper, Kelly's plication operation had been most successful.

The purpose of the Rose operation is then to unite the torn ends of the trigonal muscle so as to restore the function of the internal sphincter and bladder.

This operation is done in the following manner.* Drs. Rose and Royston use twilight sleep and local anaesthesia of one-half per cent novocaine as they believe it facilitates the dissections of the tissue. It may be done, also, under a general or spinal anaesthetic.

The incision is an inverted T through the anterior vaginal wall from cervix to a point 1 cm. from ex-

blunt dissection. The base of the incision is now carried far enough laterally to expose the base of the broad ligaments. A No. 18 french, pezzar catheter is inserted into the bladder. Traction on the catheter will clearly mark the site of the internal sphincter, just in front of the bulbous tip. Using 00 or 000 chromic catgut on a fine curved intestinal needle take a deep bite anteroposteriorly in the tissues close to the urethra approximately three-fourths of an inch

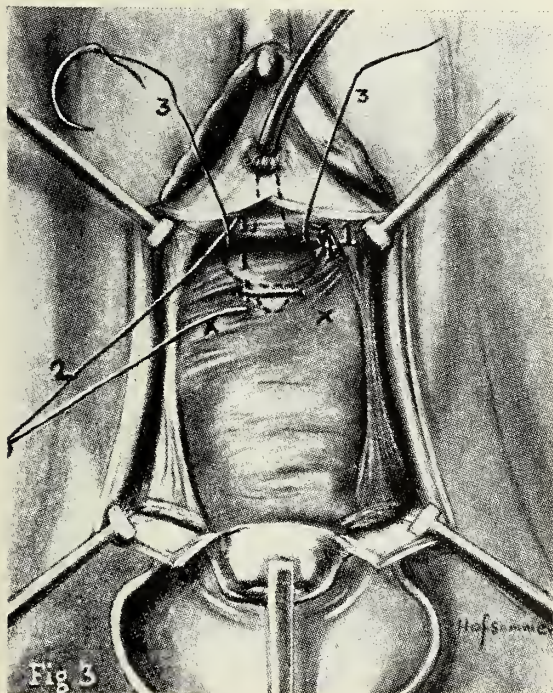


Fig. 3—(X) marks site of the ureteral orifices, (1) & (2) are the anteroposterior sutures, (3) is a deep mattress suture. Catheter should be removed before tying sutures.

ternal meatus. The vaginal flap is dissected from the bladder being very careful to avoid injury to the urethra. The bladder is then freed from uterus by

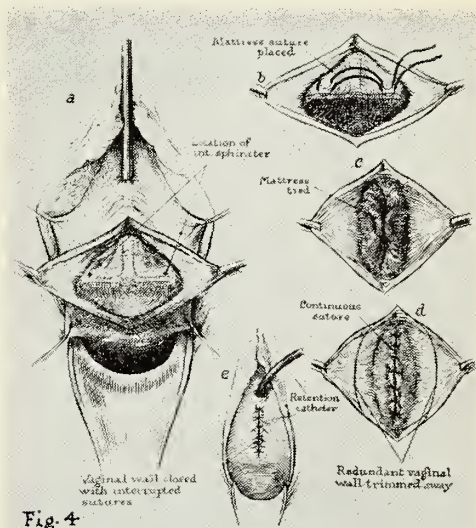


Fig. 4

Fig. 4—Kelly's Plication Operation (after O'Connor).

behind the internal sphincter. Emphasis is placed on carrying the suture anteriorly to within 1 cm. of the meatus. Care must be taken not to carry this suture too far posteriorly, to obstruct the ureteral orifice which is normally 3 cm. behind the internal sphincter. This suture is not tied at present. Now, a similar suture is placed on the opposite side. If the cystocele is marked, a third similar suture should be placed in mid-line. These sutures will restore the normal axis of the urethra.

A deep mattress suture of the same material is then placed to reinforce the internal sphincter and fix it to the trigonal muscle. The pezzar catheter is removed before any of these sutures are tied. (see figure 3).

With No. 1 chromic the fascia is brought together and reinforced with another row of sutures. The bases of the broad ligaments are sutured anteriorly to cervix, thus elevating it. The redundant vaginal mucosa is trimmed away and the incision sutured with No. 1 chromic.

Unless the cystocele is very marked there is no reason for the use of a retention catheter, however, if one is used it must be introduced carefully and

removed after five to seven days with exceeding care. In cases with little cystocele the patient may be up in chair after two or three days and up and about in a few days more.

Figure No. 4 shows the technique of Kelly's operation, modified by O'Connor. The purpose (see figure No. 4) is to note the position and axis of the sutures. You will note that they run across the vaginal axis. If you will again observe closely figure No. 2, sketch D, it may be seen that sutures taken in this manner are at and below the internal sphincter and will not repair the trigonal tear. Thus even when at times the dribbling is stopped by compression of sphincter, the dysuria will continue.

I would like to present six of my own cases of this condition with 100 per cent cures to date. I shall give you briefly one of these cases, the others being similar, differing only in age of patient and severity of the condition. Case Report:

White female, age thirty-eight, who had been coming to the clinic for a number of years being passed back and forth from one to another. Her chief complaint was incontinence and burning on urination for past three or four years and getting progressively worse. She dribbled most of the time with almost complete incontinence when on her feet.

Past History: Three normal deliveries.

Lab. Exam.: Urine negative.

Physical Exam.: Upon examination she was found to have a very slight cystocele—cystoscopic examination revealed a small cystocele below Mercier's bar and the internal sphincter did not depress with the contraction of the trigone. The distance from the internal sphincter to the trigonal floor was increased.

Operation: Under ether anaesthesia a Rose operation was performed. No retention catheter was used and she was out of bed on the third day. This was done seven months ago and she has had no dysuria, dribbling or incontinence since.

This case is typical of the other five. Three of these cases were operated at the Sedgwick County Hospital and the rest were patients of Dr. A. P. Gearhart and performed at the St. Francis Hospital, Wichita, Kansas.

In conclusion may I say, that here we have a simple procedure that gives definite results in a distressing situation, and that this procedure, if not used promiscuously and only in those cases with a lacerated trigonal muscle, the results will be very encouraging. Also, if all cases of cystocele are cystoscoped for this condition previous to operation, the per cent of cures will be greatly increased.

BIBLIOGRAPHY

1. Clute, H. M.—Urinary Incontinence in Women—Surgical Clinics of North America—June 1932.
2. Crossen, H. S., and Crossen, R. J.—Operative Gynecology 5th edition, 1939—C. V. Mosby Company, St. Louis.
3. Curris, A. H.; Anson, B. J.; and McVay, C. B.—The Anatomy of the Pelvic and Urogenital Diaphragms, in Relation to Urethrocele and Cystocele—Surgery, Gynecology & Obstetrics—Feb. 1, 1939.
4. Higgins, C. C., and Schlumberger, F. C.—Surgical Management of Urinary Incontinence in Women—Surgical Clinics of North America—October 1937.
5. O'Connor, V. J.—Functional Incontinence of Urine in Women—Surgical Clinics of North America—Feb. 1931.
6. Rose, D. K., and Royston, G. D.—A New Operation for Cystocele—American Journal of Obstetrics and Gynecology—March 1937.
7. Schumann, E. A.—The Management of Urinary Incontinence in Women—Surgical Clinics of North America—April 1936.

ARTIFICIAL FEVER THERAPY

Leland F. Glaser, M.D.*

Kansas City, Kansas

Methods of production of artificial fever are classified into the following groups: (1) Inoculation with infective organisms; (2) Protein shock therapy such as injections of egg or milk; (3) Injection of chemical agents, such as sulfur in oil; (4) Hot baths, such as steam or hot water; (5) Electrical methods, such as the conditioned hot air cabinets or the internal method of producing fever by diathermy. In our own physical therapy department all the fever therapy has been given by means of the hot water bath or by use of a Clark cabinet heated by an infra-red element. The air within the cabinet is kept heated to a temperature of 160 degrees F. and is saturated with moisture by constant evaporation of water from a vessel just above the heating element. Our patients who have received their artificial fever by the hot water method are placed in a bath tub of hot water at body temperature. They are then covered by several blankets for insulation. The water in the tub is quickly raised to 110 degrees F. and after thirty to forty five minutes, when the patient's fever has reached 105 to 106 degrees F., the patient is removed to a cot and covered with several blankets. After about an hour the patient's temperature has gradually returned to normal.

Certain physiological effects of hyperpyrexia have been fairly well established. During fever there is an increased rate of pulse and respiration in proportion to the temperature. There is an initial increase of systolic and diastolic blood pressure, and later the diastolic blood pressure drops, leading to a marked increase of pulse pressure. There is a marked increase of blood flow. The alterations of the electrocardiogram consist of shortening of the P-R interval, an

*Department of Physical Therapy, University of Kansas Hospitals, Kansas City, Kansas.

increase or decrease of the R-wave, and a depression of the R-T interval. By such studies no permanent harmful effects of fever therapy have been shown. There is a profuse perspiration with a consequent concentration of blood volume. The blood sugar is increased about twenty per cent, nonprotein nitrogen and creatinine are increased about fifteen per cent, and blood chlorides decreased five to ten per cent. The red cells are increased about sixteen per cent, hemoglobin increased eight per cent, white cells increased sixty per cent with thirty per cent increase of

polymorphs, and lymphocytes decreased twenty per cent. The carbon dioxide combining power of the plasma is decreased, sometimes leading to marked alkalinity. Urine output is decreased. The metabolic rate is increased seven per cent for each degree F. of temperature raised. The sedimentation rate of the red cells is slightly increased. The exact changes in the immune bodies resulting from fever therapy have not been completely demonstrated. There is a marked stimulation of the reticulo-endothelial system, especially after injection of malaria, as shown by an in-

STATISTICAL ANALYSIS OF PATIENTS TREATED BY ARTIFICIAL FEVER PRODUCED BY PHYSICAL MEANS

HYPERPYREXATOR				DISEASE	FEVER BATH			
Patients	Improved		Unimproved		Patients	Improved		Unimproved
	No.	Per Cent				No.	Per Cent	
1	1			Amyblopia, Tobacco	1	1		
				Asthma, Bronchial	3			3
11	7	64	4	Arthritis, Atrophic	13	7	55	6
3	3	100		Arthritis, Hypertrophic				
4	2	50	2	Infectious Arthritis	6	3	50	3
5	5	100		Arthritis, Rheumatoid	14	12	85	2
19	16	84	3	Arthritis, Gonorrheal	1	1		
3	2	66	1	Chorea, Sydenham's	1	1		
4	3	75	1	Choroiditis				
2	2	100		Conjunctivitis, Chronic	2	2	100	
				Corneal Ulcer	1	1		
1	1			Encephalitis, Residual				
1			1	Epididymitis, Chronic, G. C.				
7	3	43	4	Glaucoma (1 acute)	1	1		
3	1	33	2	Hypertension (1 obese)	4	1	25	3
				Impetigo	1			1
5	5	100		Iritis (2 acute)	6	5	83	1
5	5	100		Keratitis, Parenchymatous	4	4	100	
5	4	80	1	Keratitis, Syphilitic	4	4	100	
9	5	55	4	Multiple Sclerosis	4	2	50	2
2	1	50	1	Pelvic Infl. Disease				
1	1			Prostatitis, Chronic, G. C.	1	1		
				Psoriasis	2	2	100	
1			1	Retinitis (2 Optic Atrophy)	4	2	50	
1	1			Rheumatic Fever				
3	1	33	2	Scleroderma	3	2	67	1
16	8	50	8	Syphilis	34	20	60	14
3	1	33	2	Syphilis, Congenital	3	2	67	1
2	1	50	1	Syphilis, Meningovascular	2	1	50	1
4	3	75	1	Syphilitic Optic Atrophy	6			6
1			1	Syphilitic Nerve Deafness	1	1		
				Syphilitic Osteitis	1			1
2			2	Syph. Vitreous Opacities				
				Syphilis, Secondary Stage	3	3	100	
				Syphilis, Skin, Tertiary	1	1		
1	1			Tabes	15	10	67	5
8	4	50	4	Taboparesis	8	4	50	
5	1	20	4	Paresis	8	4	50	4
				Tuberculosis, Cutis	1	1		
4	2	50	2	Undulant Fever				
2	2	100		Urethritis, Chronic (1 GC)				
1	1			Urethritis, Acute (GC)	1	1		
2	2	100		Uveitis (1 Post Cataract Infection)	1	1		

crease of clasmotocytes. It is possible to exert a thermolethal effect on gonococci within the body by sustained fever. There is a definite decrease of the complement fixing titer of the serum of patients suffering from gonorrhea after fever therapy.

During the year 1935, no less than fifty diseases were reported as treated by hyperpyrexia. However, progress is being made by reducing the indications to fewer diseases that are decidedly benefited by hyperpyrexia. The outstanding indications for fever therapy are chronic gonorrheal infections, atrophic arthritis, latent syphilis, and nonspecific eye infections. Other diseases showing lesser improvement from fever therapy are early seronegative syphilis, tertiary syphilis of the skin, congenital syphilis, chorea, multiple sclerosis, and undulant fever. It is admitted by those who have done considerable experimental work that temperatures above 105 degrees F. for several hours will not kill the spirochetes in the blood stream and lymph glands, but are merely slowed up. Apparently by rendering the organisms less virile, and also by stimulation of the reticulo-endothelial system, the patient's immunity is raised. It is an assured fact that fever therapy enhances the subsequent treatment of syphilis, but no kind of fever will cause a positive serology to become negative.

Contraindications to fever therapy include (1) old age, (2) extreme hypertension, (3) cardiovascular disease, (4) history of repeated heat strokes, (5) pulmonary tuberculosis, (6) uncontrollable delirium.

The mortality rate of fever therapy produced by injection of malaria varies from five to ten per cent; whereas, the mortality rate from fever therapy produced by physical means is less than one per cent. The complications of any type of hyperpyrexia include heat stroke, vascular collapse, tetany, burns, and death. Autopsy findings consist of hemorrhagic pneumonia, cellular degeneration of the liver and adrenals, and perivascular fibrosis of the brain with degeneration of the nerve cells of the cortex. In our physical therapy department we have not had any deaths resulting from fever therapy. Since the installation of an electrical rectal thermometer in the fever cabinet, the danger of heat strokes has been reduced to a minimum, and also the comfort of the patient is much enhanced. Fever therapy baths are much more dangerous to administer than cabinet treatments due to uncontrollable tachycardia which may develop in a few minutes and the patient must be watched constantly during the time while he is in the water. At the suggestion of Dr. Edward H. Hashinger, we have prepared a set of directions for patients to take their fever baths in their homes where it is not possible for them to receive the treatments

at the hospital and also sure that their cardiovascular systems will stand a reasonable degree of fever. We have been very gratified with the clinical results of the few patients who received their fever in their homes but do not recommend it except in very special cases.

Up to the present time, 192 patients have received a total of 1069 fever treatments in the cabinet, and 171 patients have received a total of 1407 fever baths. We wish to present the clinical results of 153 patients treated by fever in the cabinet and of 171 patients who received their fever by the hot bath. Thirty nine patients are not included in this report, due to insufficient follow-up or due to the fact that only one treatment was given. One patient received twenty one fever baths in one series while the most treatments any one patient received in the hyperpyrexator was thirteen in one series. The treatments are given three times weekly for a series of ten for the average patient and then wait six weeks at least before the fever is repeated again. Very small percentage of our patients receive more than one series of fever sessions. The list of patients treated, together with their diagnosis and results obtained, are shown in the following charts. Chronic gonorrheal infections, atrophic arthritis, acute and chronic eye infections, syphilitic keratitis, and Sydenham's chorea are improved in sixty to eighty per cent of patients treated. Other disease showing lesser benefit from fever therapy include parenchymatous keratitis, multiple sclerosis, scleroderma, tabes dorsalis, meningovascular syphilis, syphilitic optic atrophy, impetigo, undulant fever, tertiary syphilis of the skin, and tuberculosis of the skin. In our experience, acute gonorrheal infections are much more satisfactorily treated by sulphapyridine. One recent case of chronic gonorrheal arthritis was refractory to sulphanimide but later responded with symptomatic relief to prolonged sessions of fever. The results obtained by the fever bath roughly parallel those obtained by fever given in the cabinet. Chronic gonorrheal infections will only respond to high fever sustained for sufficient time equal to the lethal dose of the bacteria. Nonspecific types of arthritis respond equally well whether treated by the fever of the cabinet or by fever bath. Very little symptomatic relief was noted by the use of fever in lipoid nephrosis, bronchial asthma, and hypertension. To date we have had no deaths from fever therapy produced by bath nor cabinet.

We have records of twenty-seven patients who have had their syphilis treated by injections of malaria. Twenty-five of these patients were treated at The University of Kansas Hospitals, one at a hospital in St. Louis, and the other patient received

his malaria at The State Hospital, Topeka, Kansas. Dr. M. L. Perry, Superintendent of The State Hospital, very kindly sent us the clinical history and progress of his patient who formerly had been admitted in our hospital. The results are summarized in the following chart. Of the twenty-seven cases, one terminated spontaneously, six terminated by complications such as coma, cyanosis, vomiting, convulsions or severe delirium, two patients died while in chill. The autopsies of these last two patients showed malaria the chief cause of death. In comparing the results of the syphilitic patients treated by injection of malaria with those treated by fever produced by physical agents, it is seen that malaria therapy is definitely superior in paresis and taboparesis. Dr. C. C. Dennie of Kansas City, Missouri, made a recent statement that some of his paretics had gone ten years with total remission of symptoms. In other types of syphilis, fever treatment produced by physical agents shows equally good results. The mortality in this series of patients treated by malaria is ten per cent; while the mortality from the treatment of patients with the cabinet or fever bath in our physical therapy department has been none.

CONCLUSION

1. Fever therapy produces definite physiological changes which can be used as a basis for treatment of disease.
2. Fever therapy produced by physical agents will benefit sixty to eighty per cent of patients afflicted with chronic gonorrheal infections, chronic non-

specific arthritis, chronic eye infections, and syphilitic keratitis.

3. Fever therapy produced by malaria injections is definitely superior to that produced by physical means in paresis and taboparesis but carries a higher mortality.

4. Fever produced by the hot bath shows roughly equally as good therapeutic benefit for the same disease as cabinet, except gonorrheal infections; while in chronic atrophic and infectious arthritis and various types of syphilis, the results are a little better for the fever bath.

5. In syphilis fever therapy benefits the patient by raising his immunity and it is now an assured fact that it enhances subsequent treatment.

6. Fever therapy has definitely established itself as a valuable adjunct in the treatment of disease.

REFERENCES

1. Lichtenstein, Louis: Pathological Changes Following Therapeutic Hyperthermia: *American Journal Pathology*: 15:3:363, May, 1939.
2. Krusen, F. H., and Elkins, E. C.: Fever Therapy by Physical Means: *J.A.M.A.* 112:1689-1696, April 29, 1939.
3. Basset, S. H., and Warren, S. L.: Electrolyte Balances During Artificial Fever: *J. Clinical Investigation* 18:239-250, March, 1938.
4. Simon, J. F.: Effects of Hyperpyrexia on Human Blood Count, Blood Chemistry, and Urine: *J. Laboratory and Clinical Medicine*: 21:400-404, January, 1936.
5. Dennie, C. C., Polsky, Morris, and Lemoine, A. N.: Hyperpyrexia Produced by the Hot Bath in the Treatment of Syphilis: *J. Missouri M. A.*: 33:1-12, January, 1936.
6. Bromberg, L.: Artificial Fever Therapy: A Report of Three Years Clinical Experience: *J. Missouri M.A.*: 36:1:24, January, 1939.
7. Korkis, A. J.: The Use of Fever Therapy in the Treatment of Syphilis: *J. Missouri M.A.*: 36:2:57, February, 1939.
8. Potter, J. E., Redewill, F. H., and Longley, E. G.: Hyperpyrexia as an Adjunct in the Treatment of Non-Surgical Urological Conditions: *J. Urology*: 37:1:214, January, 1937.
9. O'Leary, P. A.: Nonspecific Treatment of Syphilis: *J.A.M.A.*: 110:1:42, January 1, 1938.
10. Barnacle, C. H., Ewalt, J. R., and Ebaugh, F. G.: Artificial Fever Treatment of Chorea: *J.A.M.A.*: 109:2, July 10, 1937.

SUMMARIZED RESULTS OF PATIENTS TREATED BY ARTIFICIAL FEVER PRODUCED BY INJECTION OF MALARIA PARASITES

DISEASE	IMPROVED	UNIMPROVED
Taboparesis	2 (1 much improved)	
Tabes and Optic Atrophy	1	
Tabes Dorsalis (1 suspected case)	1	3 (2 died in chill)
Tertiary Syphilis (1926) (Contracted Malaria)	1 (Before W4+ K4+) (After W— K3+)	
Paresis	5	2
Meningoencephalitic Paresis	1 (child)	
Meningovascular Paresis	1	
Syphilitic Chorioretinitis		1 (treatment disc.)
Cerebrospinal Syphilis	2	1
Congenital Meningovascular Syphilis	1 (child)	
C. N. S. Syphilis	2	
Congenital Syphilis and Intstitial Keratitis	3 (children) (much improved)	

27 cases: 18 male, 9 female (5 children).

- 1 terminated spontaneously.
- 1 terminated by request.
- 6 terminated by complication.
- 2 terminated by death in a chill: autopsy report malaria chief cause of death. The fever curve is invariably of one peak. Fever, one-half to one hour before and after the peak, almost always one degree lower. Duration of fever above 102 degrees F. is 2-8 hours.
- 9 patients had 9 fever episodes or more.
- 6 patients had 6 fever episodes or less.

Most: 11 episodes.

Least: 4 episodes.

CLINICAL ILLUSTRATION OF ACID-BASE IMBALANCE*

Frank C. Neff, M.D.**

Kansas City, Missouri

Clinical medicine is immeasurably indebted to the physiological chemists who have interpreted the relationship of electrolyte elements to the physiology and pathology of the blood plasma. Van Slyke and Cullen¹ in 1917 published their work on "The Bicarbonate Concentration of the Blood Plasma". Cullen has in recent years been associated with the Children's Research Foundation of Cincinnati and his findings enter largely into the chapter on this subject in Griffith and Mitchell's textbook on Pediatrics. In that work emphasis is placed upon the desirability of discontinuing the use of the terms acidosis and alkalosis which are at best only relative, and the symptoms of which are sometimes indistinguishable.

The clinician often gets his diagnostic suggestion from the type of respiration such as the hyperpnea of air hunger in acidosis, and the pause in the breathing in alkalosis. Hartmann² has emphasized the difficulty in clinical recognition. It seems better to regard the disturbance of acid-base balance in terms of primary alkali deficit or primary alkali excess, since the normal physiological state of the body leans towards the alkaline side.

Accurate information may be gained from a determination of the amount of carbon dioxide in the blood:

	vols. %
In health	55 to 75
In acidosis	
mild case	25 to 55
severe—some symptoms	15 to 25
convulsions or coma.....	12 or lower
In alkalosis	
mild case	75 to 90
symptoms of tetany	90 to 125

In discussing this subject one first mentions the work of Gamble³ of Harvard who gave an adequate explanation of mechanism of dehydration and acid-base disturbance in clinical conditions. He demonstrated the necessity of supplying fluid and sodium chloride especially to restore volume and balance of plasma substances.

HYPERTROPHIC PYLORIC STENOSIS

Several years ago it was the custom to worry along in the course of hypertrophic pyloric stenosis of in-

fants with the so-called medical treatment, giving thick cereal feedings, and using much atropine. Such prolongation of the period of vomiting is unwarranted in our present knowledge of the disturbance which is produced in the electrolyte balance of the blood plasma. Before we had seen anything written on this phase Doctor Orr and I had observed the peculiar phenomenon in an infant about ready to be placed on the table for a Rammstedt operation; the infant apparently stopped breathing and was in such a low state of nutrition that we thought the end had come. The mother with rare instinct urged going ahead with the abdominal operation even without local anesthesia. The child's heart was still beating and the respiration returned, making it possible to complete the operation by which time the infant was doing well. He lived to join a class of post-operative cases of hypertrophic pyloric stenosis which we assembled at a clinic. We did not at that time know the physiological explanation of the phenomenon other than it was connected with starvation and dehydration.

While for many years I have tried to have pyloric stenosis operated upon in most instances within twenty-four hours of the beginning of my acquaintance with the case, it took an unfortunate experience to emphasize the necessity of prompt operation in neglected instances, while giving clysis of salt-glucose solution and a blood transfusion. This regrettable experience had to do with pyloric stenosis in identical twins, both of whom on admission were found to have alkalosis and in whom administration of fluids and salts proved to be without avail. Both infants died before operation was attempted, apparently due to apnea or hypoglycemia. The following are their interesting findings:

BLOOD:

TWIN I

Sugar 36 mg. CO₂ combining power 83 vols. per cent.

TWIN II

Sugar 34 mg. CO₂ 71 vols. per cent.

AUTOPSY:

TWIN I

Hypertrophy of the pyloric sphincter with stenosis. Bronchopneumonia (terminal). Brown pigment in spleen. Atrophy of thymus and adrenals. Acute glomerulonephritis.

TWIN II

Pyloric findings identical with those of twin I. Infantile atelectasis.

Atrophy of adrenal glands and of thymus.

The lesson from this experience seems to be that cases should not be far advanced before resorting to

*Read at the Seventeenth Annual Fall Clinical Conference of The Kansas City Southwest Clinical Society, October 5, 1939.

**From the Department of Pediatrics, School of Medicine, University of Kansas Hospitals, Kansas City, Kansas.

operation; on admission the children should have had glucose and salt solution and at once taken to the operating room for operation under local or no anesthetic. The clysis would have started physiological recovery and the operation prevented further starvation.

PERTUSSIS

Experience in practice bears out the statement in textbooks that alkalosis has been observed repeatedly in whooping cough and is one of the causes for the occurrence of convulsions in that disease. Such a manifestation is conveniently known as gastric tetany, due to the disturbance of the electrolyte equilibrium by loss of acid in the frequent recurring vomiting. That alkalosis does not occur more often in pertussis is explained by the usual small amount of gastric juice lost. Furthermore, diarrhea not uncommonly occurs in children with whooping cough. The loss of base in this way, from the pouring out of alkaline intestinal secretions, compensates for the vomiting of gastric juice, the latter consisting of five times more acid (chloride) than base. The kidneys normally take a great part in regulating the hydrogen-ion concentration of the body.

ACUTE DIARRHEA WITH UNCOMPENSATED LOSS OF ALKALI

Clinical acidosis is probably more common than is ordinarily recognized, though in children's hospitals determination of CO_2 content of blood, is commonly carried out. The degree and seriousness of the state of the hydrogen-ion concentration is thus a matter of knowledge. That more children do not get clinical acidosis is due to the compensation afforded by the common tendency to vomit in acute febrile diarrheas.

The narration of the findings in a case at the hospital during September, 1939 is illustrative. This five-months-old boy came to the hospital with diarrhea, dehydration and fever of one week's duration. The stools had become more watery and frequent than at first. During the period at home the child had continued to take possibly twenty ounces of fluid a day, had never vomited, had no blood in the stools, no parenteral infection.

I am sorry that I do not have a photograph of this child on admission to the hospital, during the comatose period. The sunken unresponsive eyes would usually be regarded as representing an irremediable terminal state. There was no urine at this time. The eye-balls were soft, the lips red, the breathing deep and irregular. The CO_2 combining power of the blood was eighteen volumes per cent. The blood findings were those of anhydremia. The stools proved negative for pathogenic organisms.

Treatment was begun on admission, using Hart-

mann's 1/6 molar sodium lactate solution by vein and clysis, 500 cc being given daily for three days. The clysis was then discontinued because of evidence of lack of further absorption and the development of a small amount of edema. Food was given by gastric tubing until the child would nurse; and small daily blood transfusions until the blood volume was restored. It was two days before the CO_2 of the blood began to rise; on the fourth hospital day it was up to twenty-nine vols. per cent. By the eighth day the temperature was normal, the child taking a normal diet, and on the tenth day discharged cured.

In the light of modern knowledge of acid-base imbalance in diarrhea it would seem that drugs have little place, at least those which were commonly given in former years such as castor oil, calomel and bismuth. The physician who has access to a hospital would do well to take the child there promptly on the appearance of dehydration. An important factor in the course of diarrheas is the state of the renal function, in that a failure to act normally permits the accumulation of acid products; the replacement of plasma material and the return of urinary activity are necessary for restoration of the normal acid-base balance.

There is no doubt that the administration of glucose solution is of the utmost importance because of its diuretic action. It may be given in 2½ per cent concentration in a normal salt solution by clysis without any fear of local disturbance, using 10 cc or more per pound of body weight and repeating within twenty-four hours daily until contra-indicated by the appearance of edema or by the restoration of normal function. Intravenous infusion of the above solutions may need to be used. High sugar solutions by the mouth are definitely indicated, contrary to the popular belief that sugar makes the diarrhea worse.

ACID-BASE DISTURBANCE FROM SEVERE RENAL DAMAGE¹

Renal Infantilism. Boy, F. C. Aged twelve years. Hospital No. 80232. An analysis of this case in abbreviated form is as follows:

Complaints:

Lack of urinary control since birth.

Failure to grow since age of five years.

Actual size	36¾ lbs.	44 in.
Average for age	78 lbs.	56 in.

Physical findings:

Well-proportioned.

Head, neck, chest, reflexes, genitalia negative.

Laboratory findings:

Pus in urine, 5,000 cells per cmm.

Urine culture; hemolytic streptococcus.

Red and white blood cells normal, Hb 78 per

cent, polys 68 per cent, Urea of blood 23.1 mg. NPN 40 mg. creat. 1.6 mg., CO_2 28 vols. per cent. Kidney function low as shown by the following repeated tests:

PSP 4.4 per cent 6.6 per cent total.

In such a case, life-long urinary stasis and infection are probably due to congenital malformation in the urinary tract. If nephrosclerosis begins in early life, there is definite inhibition of the growth of the body dependent upon the metabolic disturbance. Because of the disturbance in renal function there is a retention in the body of acid phosphate, due to failure of the kidneys to excrete waste products. Mitchell⁵ and his associates have made the suggestion that inorganic phosphates of the blood rise to a high level, while the calcium is reduced below normal in

this condition; the theory offered is that there is a high concentration of phosphorus in the intestine by the formation of insoluble calcium phosphate, which blocks the absorption of calcium from the bowel and thus causes a deprivation in the patient.

CHRONIC URINARY INFECTION AND STASIS IN CONGENITAL URETERAL STENOSIS

Case report of infant boy, aged three months on admission. Hospital No. 58014. Accompanying an attack of otitis media this child developed pyuria with general symptoms of air hunger and stupor; admitted to this hospital with the blood showing a CO_2 combining power of nineteen volumes per cent. The urine remained alkaline and infected for months, giving positive cultures for proteus bacillus.



Fig. 1

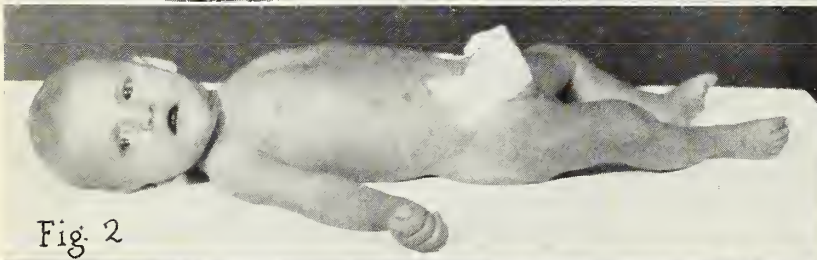


Fig. 2

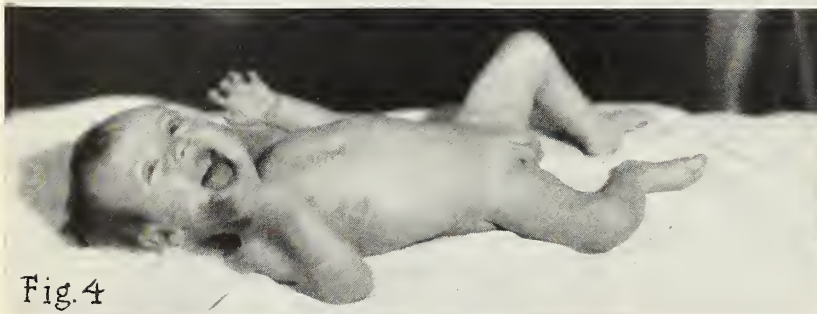


Fig. 4

1.—Identical Twins in Terminal Stages of Pyloric Stenosis.

2.—Infant Recovering from Severe Acidosis.

3.—Renal Infantilism.

4.—Infant During Long Period of Disturbed Renal Function and Acidosis.



Fig. 3

Symptoms of acidosis always appeared when attempting to establish a ketogenic diet or when using acid-forming therapeutic agents. The administration of ammonium chloride would be followed by a drop of the CO₂ combining power of the blood, even as low as twelve volumes per cent. Dilatation of the ureters by the urologist (Nelse Ockerblad) the feeding of large amounts of orange juice, and on one occasion intravenous injection of 75 cc of 1/6 molar sodium lactate solution started the boy on the road to recovery. At no time was there an abnormal retention of nitrogen in the blood.

In the course of three years since the illness, the bacillus proteus infection has disappeared, and the kidney function has become normal. The cure of this child should be assigned to the relatively early remediation of the obstruction, and the prevention of complete kidney destruction.

The reaction of normal urine is said to depend principally on the ratio of di-sodium hydrogen phosphate to mono-sodium hydrogen phosphate.⁶ When there is diminished function from renal damage, the acid ammonium phosphate, the chief acidifier of the urine, cannot be removed from the body, thus interfering with the mechanism of compensation and neutralization by acid elimination. The kidneys therefore excrete urine which has a high alkalinity. In health therefore it prevents any tendency to an increase in the hydrogen-ion concentration of the blood plasma.

In the treatment of infected urine produced by severe renal damage from obstruction of the urinary tract, the tendency to acidosis makes it unwise to use acid-forming drugs or diets. Large amounts of citrous fruit and grape juice are advisable; the bacteriuria should be combated with sulfanilamide rather than mandelic acid; every effort should be made early in the patient's life to relieve the stasis in the urinary tract.

REFERENCES:

1. Van Slyke and Cullen: *J. Biol. Chem.* 30, 289, 1917.
2. Hartmann, Alexis: Acidosis, Alkalosis and Dehydration, *Col. Med. Jour.*, 26: 373-386 Nov. 29, 1929.
3. Gamble, James L.: Dehydration. *N. E. M. J.* 201: 909-917 Nov. 7, 1929.
4. Drake, T. G. H., Marsh, P. and Gamble, J. L. The Alkalosis of Vomiting and the Acidosis of Advanced Renal Disease. *Amer. Jour. of Dis. of Child.* 40: 705-717, October 1930.
5. Mitchell, A. G.: *Amer. Jour. of Dis. of Child.* 40: 101, 1930; Mitchell, A. G., and Guest, George M. *Jour. of A. M. A.* 97, 1045, 1931.
6. Alstead, Stanley: *Edinb. M. J.* 43: 292, May, 1936.

"The X-ray Reveals Tuberculosis Before Symptoms Appear" is the slogan for this year's Early Diagnosis Campaign—an educational campaign carried on annually by the more than 2,000 tuberculosis associations throughout the country during the month of April.

A TEN-YEAR STATISTICAL STUDY OF CAESAREAN SECTION IN SEDGWICK COUNTY*

Robert H. Maxwell, M.D.

Wichita, Kansas

It is a well established fact that in any type of statistical survey figures and percentages can be used to prove or disprove any preconceived fact. However, in this survey we have attempted to show principally, the incidence, fetal mortality, maternal morbidity and mortality associated with Caesarean sections in Sedgwick County from January 1, 1929, until December 31, 1938.

The material has been compiled by careful examination of all case histories on Caesarean sections done on patients at or near term at Wesley Hospital, St. Francis Hospital, Wichita Hospital, County Hospital, and the Salvation Army Hospital.

Permission to use these records was obtained from the individual physicians before the charts were examined.

In the past five years, many of the leading medical centers in the country have published statistics on the incidence, indications and mortality rates, and we feel that it is undoubtedly a valuable method of checking up on ourselves, and rectifying or improving upon a procedure, which can be a great adjunct to good obstetrics or conversely, an unwise and dangerous procedure conveying a high maternal mortality.

The challenge has been made by men within the profession that the obstetricians particularly are performing the Caesarean operations far too frequently and without proper indications and that many patients would deliver spontaneously if the specialists would give them plenty of time. Be that as it may, we are not attempting to answer that challenge, but we will endeavor to show briefly what has gone on the last ten years and at least have a record for future comparison.

The following chart gives a general idea of age of patients, parity, operating surgeons, and anesthesia used. The only comment we wish to make in addition, is that most authorities feel that spinal anesthesia is not a good procedure in Caesarean section.

Chart No. 1 GENERAL DATA

1. In the entire group of 212 sections there were 126 (71 per cent) Primiparas and 86 (29 per cent) Multiparas.

*Read before the Sedgwick County Medical Society, September 19, 1939.

- 2. They were operated on by twenty-four surgeons.
- 3. Type of anaesthesia used was as follows:
 - a. Nitrous oxide and ether..... 105
 - b. Ether 7
 - c. Nitrous oxide 22
 - d. Local 6
 - e. Spinal 4
 - f. Nitrous oxide and local..... 4
- 4. The youngest patient was 14 years and the oldest was 44 years of age.
- 5. The operative time varied from 20 to 113 minutes.

INCIDENCE

Caesarean section was performed during this ten year period 212 times. We have divided this number up in years and listed them under the individual hospitals. The yearly division was made primarily to determine any increase in frequency.

In compiling these figures the number of hospital deliveries was used and the number of home deliveries was disregarded. In considering the County Hospital we did use the number of home deliveries together with hospital cases. This was done because only the abnormal cases are admitted to the hospital for delivery, consequently, it was felt that incidence figures arrived at on any other basis would not be accurate.

The following chart is shown to give an idea as to how many cases were delivered in the hospitals each year together with the number of sections each year and the incidence.

Chart No. 2

Year	Deliveries	Sections	Incidence
1929	1083	18	1-60
1930	1236	18	1-68
1931	1155	22	1-55
1932	1058	16	1-66
1933	1009	20	1-50
1934	1237	15	1-92
1935	1428	17	1-84
1936	1545	31	1-50
1937	1705	24	1-71
1938	1857	33	1-56
TOTAL	13313	212	1-63

The following chart will demonstrate the distribution of these sections in the five hospitals under consideration, with the incidence of each hospital.

Chart No. 3

HOSPITAL DISTRIBUTION AND INCIDENCE

Hospital	Deliveries	Sections	Incidence
Hospital A	4427	86	1-52
Hospital B	4454	84	1-53
Hospital C	2431	25	1-97
Hospital D	942	5	1-190
Hospital E	612	12	1-51
TOTAL	13,313	212	1-63

The fourth chart is merely shown for purpose of comparison and demonstrates how the incidence of Caesarean section in Sedgwick County compares with the leading clinics throughout the country.

Chart No. 4

COMPARATIVE INCIDENCE AND MORTALITY RATES ON CAESAREAN SECTIONS

		Incidence		Mortality
Fraser	Montreal	1938	1-44	3.0
Greenhill	Chicago	1930	1-48	
Skeel-Jordon	Cleveland	1932	1-44	7.15
Monhaupt	Germany	1932	1-45	
Johnson-Smith	Houston	1931	1-36	14
Palmer	Akron	1934	1-41	4.5
Morgeson	Boston City Hosp.	1929	1-29	3.4
Hawkes	N. Y. Nurs. and Childs.	1929	1-62	3.6
Irving	Boston Lying In	1935	1-35	3.1
Barrett	Womens Hosp. N. Y.	1938	1-22	2.9
	Sedgwick Co.	1939	1-63	4.7

It must be remembered that the incidence at Hospital E is somewhat greater as ten out of the twelve sections were done on mental deficient patients primarily for the purpose of sterilization. Also the incidence at the County Hospital is extremely low but we have considered both hospital and home deliveries. If only the hospital deliveries at the county are used then the incidence drops to 1-23.

The following is a graphic representation of the indications for doing the operation. This was rather difficult in many instances, but in every case the indication was taken from the chart as it was written by the man who did the operation.

There are a total of seventeen indications given and by far the most common was that of pelvic disproportion. In this term is included principally contracted inlet or flat pelvis.

Chart No. 5

INDICATIONS FOR OPERATION

1. Pelvic Disproportion	96
2. Previous Caesarean Sections.....	25
3. Placenta Praevia	22
4. Long Labor—No Progress.....	14
5. For Sterilization Purposes	13
6. Abruptio-Placenta	10
7. Non Convulsive Toxemias	9
8. Convulsive Toxemias—Eclampsia	7
9. Cardiac Lesions with Decompensation.....	3
10. Recto-Vaginal Fistula	2
11. Diabetes	2
12. Fibroid Obstructing Labor.....	2
13. Tuberculosis	1
14. Bi-Cornate Uterus	1
15. Arthritis-Anklyosis of Hips.....	1
16. Fetal Monster	1
17. No Indications	3

The next consideration and probably the most important is that of maternal mortality. In this ten year period, ten mothers died as the direct result of the operation or a combination of the indication and the operation. This gives a mortality rate of 4.7 per cent for the entire series. Five of those patients who died were convulsive toxemias or eclamptics which account for fifty per cent of the mortality for this one indication alone.

In recalling the chart on indications there was a total of eight eclamptics operated upon and five died, which gives a maternal mortality of 62.5 per cent for the radical management of convulsive toxemias.

The following chart shows the maternal mortality and morbidity at the five hospitals.

The maternal morbidity was computed according to the standards of the National Maternal and Child Welfare Committee. That is all patients who forty-eight hours after delivery began running a temperature of 100.8 degrees or over for two consecutive days were considered morbid. Also those patients who required blood transfusions, post-operative, were considered morbid.

Chart No. 6
MATERNAL MORTALITY AND MORBIDITY

Hospital	Number	Incidence	Deaths	Morbidity	Mortality
Hospital A	86	1-52	1	32%	1.16%
Hospital B	84	1-53	5	26%	5.9%
Hospital C	25	1-97	2	15%	8%
Hospital D	5	1-190	2	20%	40%
Hospital E	12	1-51	0	25%	0
TOTAL	212	1-63	10	23.6%	4.7%

The next chart is to show the cause of death of the ten patients who comprise the mortality group.

Chart No. 7
CAUSE OF MATERNAL DEATHS

1. Eclampsia	4
2. Abruptio-Placenta with Eclampsia.....	1
3. Contracted Pelvis—Peritonitis	1
4. Abruptio-Placenta with Ruptured Appendix.....	1
5. Flat Pelvis—Porro Section Peritonitis.....	1
6. Flat Pelvis—Pulmonary Embolism.....	1
7. Acute Cardiac Decompensation.....	1
TOTAL	10

We wish at this point to consider a little more in detail the question of Caesarean section as the treatment for eclampsia. We have seen that out of the ten who died five were eclamptics and out of the eight eclamptics who were operated on five died.

This is a terrifically high mortality and makes one believe as most authorities are rapidly admitting—that in most instances, section is not the treatment for eclampsia. We believe it is wrong to say that it is never the treatment for eclampsia because many other factors enter in; obviously, a patient with a contracted pelvis and eclampsia must be sectioned.

We are considering, of course, those patients who have had convulsions—the pre-eclamptics who do not respond to medical treatment and are progressively growing worse, may be sectioned justifiably. As soon as they have convulsions they are very poor surgical risks; their cardio-vascular system is unstable and dilatation of the heart with pulmonary edema is very often the cause of death.

For many years the treatment of eclampsia has been divided among two groups. Those who advocate the radical treatment, Caesarean section, and

those who believe the conservative or medical treatment gives the best results. Gradually in the last twenty-five years the conservative method has been accepted overwhelmingly by the leading authorities. Consequently, the maternal mortality in eclampsia has been reduced as low as five per cent with an average of about ten per cent.

Strogenoff who was the original advocate of conservative treatment with morphine and chloral hydrates reports a mortality rate as low as five per cent. Therefore, in this particular series of cases the operative method has resulted in about a sixty-two per cent maternal mortality for eclamptics.

The following chart gives an idea how far the pendulum has swung in favor of conservative treatment.

Chart No. 8

Clinic	Treatment
Bailey, New York	Conservative
Brindeau, Paris	Radical
Caldwell, New York	Conservative plus paraldehyde
Danforth, Evanston	Conservative plus venesection
Davis, Milwaukee	Conservative plus magnesium sulphate
DeLee, Chicago	Radical
Dieckmann, St. Louis	Conservative plus magnesium sulphate
Duncan, Montreal	Conservative
Ehrenfest, St. Louis	Conservative plus occasional section
Foulkrod, Philadelphia	Conservative plus induction (ruptured membrane)
Holmes, Chicago	Conservative
Litzenberg, Minneapolis	Conservative plus venesection
Miller, New Orleans	Conservative
Mussey, Rochester, Minn.	Conservative
Newell, Boston	Conservative
Piper, Philadelphia	Middle line therapy
Plass, Iowa City	Conservative
Polak, Brooklyn	Conservative plus magnesium sulphate
Rucker, Richmond	Conservative plus magnesium sulphate
Schumann, Philadelphia	Conservative and occasional section
Titus, Pittsburgh	Conservative plus bag induction
Ward, New York	Conservative plus glucose

In computing percentages and figures on fetal mortality, we have used those cases in which the pregnancy has gone beyond twenty-eight weeks which is considered to be past the period of viability.

The following chart (No. 9) demonstrates fetal mortality according to hospitals together with the incidence at that hospital. All babies living at the end of fourteen days were taken into account.

Chart No. 9
FETAL DEATHS

Hospital A	1-52	86	5	5.8%
Hospital B	1-53	84	7	8.6%
Hospital C	1-97	25	6	26%
Hospital D	1-190	5	0	—
Hospital E	1-51	12	1	8.3%
TOTAL	—	—	19	8.9%

(Continued on Page 205)

PRESIDENT'S PAGE

To the Members of The Kansas Medical Society:

Once again, let us pause long enough to thank every member of the Sedgwick County Medical Society for the excellent meeting they provided for us at Wichita last week.

Let us as individual members of the Kansas Medical Society be thankful that we live in a country where such a meeting can be held without fear of molestation from within or from without.

We are on the threshold of a new year.

We have inherited from the officers, councilors, committee men and members of last year certain ethical, scientific and economic concepts of the principles and practices of medicine which must guide us throughout the coming year. It is our determination to carry on, profiting if possible, by the experience of those who have preceded us. Our membership may be assured that medical standards will never be lowered and that every possible effort will be made to raise them during the coming year. This can be done with the help of our entire membership. Join with us in the attempt to make this a banner year for Kansas medicine.

Sincerely,

A handwritten signature in cursive script that reads "Loren Loveland M.D.".

President.

EDITORIAL

THE NEW PRESIDENT-ELECT

The Society welcomes Dr. C. D. Blake of Hays as its President-Elect for 1940-1941. Dr. Blake is particularly well versed and well informed in the work of the Society. He has been a counselor for the past six years, has been a member of many Society committees and has assisted and taken part in numerous other functions of the organization. This experience coupled with his general ability and his knowledge of Kansas medical affairs and problems provides him with excellent qualifications to accept the important responsibilities of his presidency in 1941-42. We feel certain that the Society has, in its election of Dr. Blake, made a worthy addition to its long line of capable and efficient Presidents.

A FINE MEETING

The Journal emphatically endorses the sentiments of the House of Delegates in thanking the Sedgwick County group for another successful meeting. The entertainment was more than adequate and the stag banquet skit presented on Tuesday night was most original. The whole meeting moved with the professional smoothness that bespeaks long and painstaking planning by committees that receive small credit.

The total registration of 852 represented a very favorable attendance and the scientific program including forty-five papers by twenty-four speakers was undoubtedly one of the best the Society has ever had.

The animated scientific exhibits were new to Kansas meetings and attracted much interest. The other scientific exhibits were among the largest and most complete ever presented. The presentation of awards for merit of scientific exhibits was a new addition.

The technical exhibits consisted of the following: J. B. Lippincott Company, Philadelphia; Coca-Cola Company, Atlanta, Ga.; Lederle Laboratories,

Inc., New York; DePuy Manufacturing Co., Warsaw, Ind.; Riggs Optical Company, Kansas City, Mo.; Davis & Geck, Inc., Brooklyn, New York; Harrower Laboratory, Inc., Glendale, Calif.; Goetze Niemer Company, St. Joseph, Mo.; Petrolagar Laboratories, Inc., Chicago; Westinghouse X-Ray Co., Inc., Long Island, N. Y.; W. E. Isle Company, Kansas City, Mo.; Philip Morris & Company, Ltd., New York; M & R Dietetic Laboratories, Inc., Columbus, Ohio; E. R. Squibb & Sons, New York; H. J. Heinz Company, Pittsburg, Pa.; Doho Chemical Corporation, New York; Gerry Optical Company, Kansas City, Mo.; Burroughs Wellcome & Co., Inc., New York; Eli Lilly & Company, Indianapolis, Ind.; Becton, Dickinson & Co., Rutherford, N. J.; Cerophyl Laboratories, Kansas City, Mo.; C. B. Fleet Company, Inc., Lynchburg, Va.; Cole Chemical Company, St. Louis, Mo.; Masemore Adjustment Company, Wichita, Kan.; Sharpe & Dohme, Inc., Philadelphia, Pa.; Denver Chemical Manufacturing Co., New York; De Vilbiss Company, Toledo, Ohio; Parke, Davis & Company, Detroit, Mich.; General Electric X-Ray Corp., Chicago; Mead Johnson & Company, Evansville, Ind.; American Hospital Supply Corp., Chicago; Holland-Rantos Company, Inc., New York; Gerber Products Company, Fremont, Mich.; Medical Protective Company, Wheaton, Ill.; Mid-West Surgical Supply Co., Wichita; A. S. Aloe Company, St. Louis, Mo.; George A. Breon & Company, Kansas City, Mo.; American Optical Company, Kansas City, Mo.; John Wyeth & Brothers, Inc., Philadelphia, Pa.; H. G. Fischer & Company, Chicago, Ill.; Dehner Artificial Limb Co., Omaha, Nebr.; Zemmer Company, Pittsburgh, Pa.; Schering Corp., Bloomfield, N. J.; Archer-Taylor Laboratories, Wichita, Kans.; Steffen Ice Cream Co., Wichita, Kans.; American Surgical Supply Co., Lincoln, Nebr.—to which the Society owes much appreciation for their generous interest and support of the meeting.

An innovation of unusual interest was the physician's assistants program held on May 13. The total registration of 325 assistants exceeded all expectations and the success of the event as a whole is evidenced by the fact that the group organized a Kansas Medical Assistants Association with the recommendation that a similar meeting be held each year. It is believed that the assistants meeting is

an original idea and that it will probably be duplicated in many other states.

All three sessions of the House of Delegates were well attended and several actions of importance were announced. The officers and councilors elected were as follows: Dr. C. D. Blake, of Hays, President-Elect; Dr. H. N. Tihen, of Wichita, First Vice-President; Dr. J. L. Lattimore, of Topeka, Second Vice-President; Dr. John M. Porter, of Concordia, Secretary; Dr. Geo M. Gray, of Kansas City, Treasurer; Dr. L. D. Johnson, Chanute, as Councilor of the Third District; Dr. W. P. Callahan, Wichita, as Councilor of the Sixth District; Dr. George O. Speirs, Spearville, as Councilor of the Twelfth District; and Dr. O. A. Hennerich, Hays, as Councilor of the Tenth District. Dr. J. F. Hassig, of Kansas City, was re-elected as a delegate to the American Medical Association and Dr. Lucius E. Eckles, of Topeka, was re-elected as a member of the Editorial Board.

The Editor is disturbed, however, by one feature common to all of our annual gatherings and that is the conflict between the day-time meetings of the delegates and the scientific sessions. We have seen a guest speaker, who has traveled half-way across the continent, speak to an audience of twenty-five doctors while a hundred doctors dutifully attend the House of Delegates in a nearby hotel. This is no reflection on the individual delegates who merely did their duty, but it is an indication that better planning will avoid any discourtesy to our speakers and allow the delegates to profit more from the programs. The Council may well consider and advise a better plan, although it may involve the elimination of a portion of the scientific program.

Kansas takes pride in the fact that it has one of the best state meetings in the country, and it is hoped that Dr. Charles Rumbold, Dr. Arthur Fegly, Dr. John Kleinheksel, Dr. James S. Hibbard, Dr. Norris L. Rainey, Dr. Geo. E. Milbank, Dr. J. Stanley Reifsneider, Dr. Frank L. Menahan; Dr. C. C. Brown, Dr. James W. Shaw, Dr. George B. Morrison, Dr. Chester H. Warfield, Dr. C. D. McKeown, Mr. Jack Austin and the other members of the Sedgwick County Medical Society may feel repaid for the great amount of time and effort they gave to

the eighty-first annual session by the universal compliments the meeting received.

A. M. A. MEETING

The largest meeting in the history of the American Medical Association will get under way in New York on Monday morning, June 10, when the organization's ninety-first annual session opens, the program for which is published in the May 4 issue of *The Journal of the Association*.

For five days several hundred physicians will unselfishly share the results of their patient and exhaustive research into all phases of medicine and surgery with the more than ten thousand members of the Association who are expected to attend the sessions. Not only will the attending doctors gather to acquire knowledge of the newest weapons for their constant battles with the afflictions of mankind but they will also discuss and formulate plans for the increased protection and promotion of the health of the nation.

Annual sessions of the Association are, generally speaking, divided into three classifications. The scientific meetings are devoted to the reading of papers dealing with the medical advances made during the past year. These papers are presented and discussed by doctors who are leaders in their respective fields of medicine. Augmenting these meetings are the exhibits, divided into scientific and technical sections. The scientific exhibits provide the attending doctors with what might be termed a "visual education" in the latest contributions to medical knowledge. Many of them are correlated with papers read before the scientific meetings. In the technical exhibits the practicing physician is given the opportunity of seeing and examining hundreds of new instruments, the latest advances in hospital equipment, the newest books and a wide variety of devices designed by the manufacturers for the convenience of the patient and the physician.

The third portion of the sessions involves the House of Delegates, the body which governs the Association and determines its policies. It is the voice of organized medicine. The House is a democratically constituted body, composed of 174 members representing every state in the union, the Dis-

trict of Columbia, Alaska, Hawaii, the Panama Canal Zone, the Philippine Islands, Puerto Rico, the sixteen scientific sections of the Association, the Medical Corps of the Army and the Navy and the United States Public Health Service.

A TEN-YEAR STATISTICAL STUDY OF CAESAREAN SECTION IN SEDGWICK COUNTY

(Continued from Page 201)

From the type of operation done it is interesting to note the fifty per cent reduction in maternal mortality when the low cervical or flap type of operation is used. Most authorities feel that this type of operation carries a lower morbidity and mortality and it is becoming more popular in the last few years.

It also must be remembered that in this series the low cervical or flap operation has been reserved in many instances for patients who have been in labor for some time. Chart No. 10 demonstrates the above points.

Chart No. 10

MATERNAL MORBIDITY AND TYPE OF OPERATION

Type	In Labor 12 Hrs.	Cases	Morbidity	Mortality
Classical	15	163	41 (25.1%)	8 (4.9%)
Low Cervical	16	47	18 (38%)	1 (2.1%)
Porro	1	2	0 —	1 (50%)

75 Cases or 35% were in labor 12 hrs. or more before the operation was done.

32 or 42.5% of this group had morbidity.

SUMMARY AND CONCLUSIONS

As we have previously stated, it is unwise and often inaccurate to draw conclusions from figures which have been compiled from a chart by a person who had no direct supervision of the cases upon which he is reporting. Therefore, our conclusions should be limited and more in the form of a summary of these facts and figures which have been presented.

1. In the ten year period, Caesarean section was performed in Sedgwick County 212 times, giving a total incidence of 1-63. This incidence compares very favorably with the leading clinics throughout the country.

2. The maternal mortality of 4.76 per cent is somewhat higher than in other clinics but is still comparatively good.

3. Maternal morbidity of 23.6 per cent is excellent and not much higher than by delivery by the vaginal route.

4. Mortality for eclampsics is 62.5 per cent which is extremely high.

5. Fetal mortality average of 8.9 per cent is extremely low.

6. The classical type of operation was done by far most frequently but the low cervical type of operation carried a lower maternal mortality, and it is felt that from the standpoint of complications the flap operation is the one of choice.

7. In 1929 the incidence of Caesarean section was 1-60 and in 1938 it was 1-56 which shows no appreciable increase in the frequency of the operation.

REFERENCES

- (a) American Journal of Ob. & Gyn. Vol. 37, No. 3, 1939, Page 435 by Ralph L. Barrett, B.S., M.D., F.A.S.C., New York, N. Y.
- (b) The Toxemias of Pregnancy—Stander Vol. XV Page 136.

CANCER CONTROL

CARCINOMA OF THE SMALL INTESTINE

G. A. Westfall, M.D.

Halstead, Kansas

Carcinomas of the small intestine compose about three per cent of all the malignancies of the intestinal tract although in our series we have not found primary small gut cancer nearly so frequently.

(1) The disease occurs in three forms: First, local or generalized polyposis; second, localized adenoma with carcinomatous changes in the structure; third, the development of a single or multiple carcinoid or argentaffin tumor.

Most gastro-intestinal polyps are found in the colon and small gut malignancies are in the last two groups. When polyps do occur in the small intestine, they seldom become malignant.

The lesions are most frequently found in the first part of the duodenum, ampulla of Vater, jejunum and near the ileocecal valve. They are found more frequently in the jejunum. Carcinoma of the appendix occurs but is usually of the carcinoid type which metastasizes late.

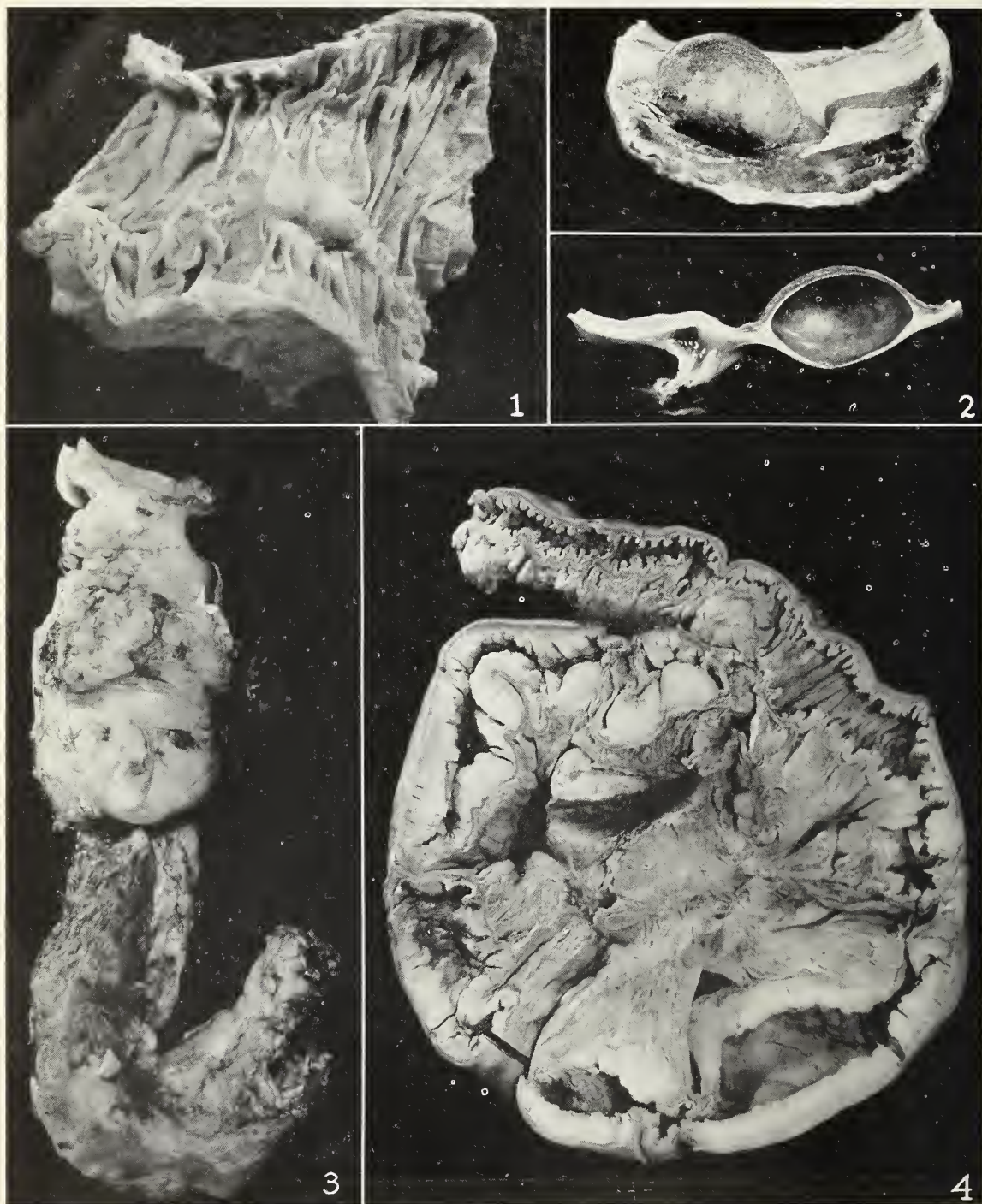
(2) The two common benign tumors of the small intestine are the papillomata and enteric cysts. Sarcoma occasionally is seen.

The symptoms vary greatly and depend on the position, rapidity of growth and character of the tumor. They have an insidious onset but the majority of cases are not seen until the symptoms of obstruction occur. Most of them bleed and they give a history of anorexia, weight loss and fatigue

which is progressive for several months before obstructive symptoms occur. They start with colicky pains referred to the epigastrium. They last from a few minutes to two or three hours. At first the symptoms are intermittent and then as the obstruc-

tion becomes complete the pain increases and is constant and distention and fecal vomiting is present.

The higher the lesion the more the symptoms are similar to pyloric obstruction. The lower the lesion the more insidious is the onset and jejunal



1.—N.E.M. Cancer of the papilla of Vater.
2.—D. Y. Intussusception, cystic tumor.

3.—R. B. Cancer of ileum with intussusception.
4.—B. S. Sarcoma of ileum.

and ileal tumors may go from one to one and a half years before obstructing. As in other gut cancers they are more frequent in men than women but occur in relatively younger individuals.

Small gut cancer has to be differentiated from a large variety of conditions which may cause obstruction: Gumma, benign tumors, tuberculous growths, adhesions, regional ileitis, anomalies, intussusception and extra-enteric tumors must be considered.

A gumma would not occur without other luetic signs and the Wasserman test is very reliable in gastro-intestinal lues. Benign tumors have a more gradual onset but usually are only differentiated at operation. Tuberculous tumors of the small intestines are nearly always secondary to pulmonary tuberculosis. Intussusception in an adult is always the result of some pathology and frequently is caused by a cancerous growth.

Nearly all malignant growths in the lumen of the small gut bleed and the persistent presence of occult blood in the stool is very indicative of cancer. Colon and stomach pathology must be ruled out.

The x-ray is of help if there is partial obstruction, but in those cases where complete obstruction is even suspected it is dangerous to give barium by mouth. Coiling of the gut and dilatation of the upper portion of the gut indicate obstructive processes.

Fortunately nearly all of the conditions that must be differentiated from cancer also require surgery and too much time must not be lost before doing an exploratory laparotomy.

The treatment is surgery. Radical resection with entero-anastomosis where possible is the patient's only chance of a cure. The prognosis is not good. About twenty per cent die from operations and few live over three years. However there are a few who get permanent cures. They are nearly all of the carcinoid type of tumor however. Tumors about the bile ducts are not operable.

The following cases are illustrative of different small gut neoplasms:

- Case 1 N.E.M. Cancer of the papilla of Vater.
- Case 2. D.Y. Intussusception, cystic tumor.
- Case 3. R.B. Cancer of ileum with intussusception.
- Case 4. B.S. Sarcoma of ileum.

There were 160 medical schools in the United States in 1900, with 5,214 graduates. In 1938 there were only 77 medical schools, but the number of graduates was approximately the same, 5,194.

EYE, EAR, NOSE & THROAT

CORNEAL ABCESS FOLLOWING FOREIGN BODY

J. F. Gsell, M. D.

George F. Gsell, M. D.

Wichita, Kansas

Complications following foreign bodies imbedded in the cornea are not uncommon when proper after care is neglected. The following case report is submitted because of the unusual clinical picture based upon violent infection which limited itself almost exclusively to the corneal stroma.

History: The patient, a farmer, got some iron in the left eye while working in a blacksmith shop on May 10, 1939. He went to a doctor in a nearby town who removed a foreign body from the cornea. The eye became red and inflamed the next day but he did not return to his doctor for nine days, when he was sent immediately to Wichita. The patient was observed in our office on May 20, 1939.

Clinical course: The vision in the right eye was 20/20 and the eye appeared quite normal. The upper lid of the left eye was somewhat inflamed, but not swollen. The bulbar and tarsal conjunctiva was fiery red and slightly edematous. The cornea was lemon yellow in color and completely opaque except for a small portion in the upper temporal quadrant which was faintly translucent. In the nasal portion there was a small break in the epithelial continuity from which yellow pus was extruding. There was a small amount of pus lying in the lower cul-de-sac. The tactile tension was minus one. The anterior chamber could not be visualized.

The eye presented the picture of panophthalmitis except there was light perception and fairly good light projection in all fields, absence of temperature and minimal pain.

A diagnosis of corneal abcess was made, the patient was informed that sight could not be preserved and enucleation advised. He refused immediate removal of the eye so was sent into the hospital.

In the hospital the temperature reached 99.4 on the second day, otherwise it remained normal. A smear from the pus showed many leucocytes and occasional diplococci resembling pneumococci. Culture however showed the next day pure staphylococcus aureus. Antiseptics and heat were applied to the eye. The cornea began to bulge slightly on the second hospital day. On the fourth day it protruded

between the closed lids, and the patient consented to operation.

The eye was enucleated, convalescence was uneventful and he was released on the fifth post-operative day.

Microscopic pathology: The corneal vessels are markedly engorged and are surrounded by masses of leucocytes and round cells. There is some edema of the pericorneal subconjunctival connective tissue. The cornea is remarkable. It is increased in thickness so much that it rises as a truncated cone almost two-thirds the width of the cornea. The cornea in the central portion is over 4 mm. in thickness. The epithelium over three-quarters of the cornea appears to be unbroken. Over the remaining one-quarter the epithelium is pulled away. This appears to be a process of fixation.

The region of the anterior corneal stroma, extending in a band 2 mm. wide from one scleral spur around the outline of the cone to the opposite scleral spur, is composed of a necrotic mass of leucocytes and round cells. This invasion stops abruptly at the scleral spurs.

There is left an area about 4 mm. wide and 2 mm. thick in the posterior central portion of the cornea which is composed of poorly staining degenerated stromal fibers, vacuolated and entirely acellular. Descemet's membrane is visible, is longer than normal (apparently stretched), and is broken in two places. The anterior portion of the anterior chamber is filled with a narrow band of leucocytes. Behind this is a slightly wider band of fibrin with occasional leucocytes enclosed in its meshes. The remainder of the chamber is free of cells.

The iris and ciliary body do not show much change. On one side there are several small groups of leucocytes lying in the vitreous over the pars planum of the ciliary body and posteriorly for a short distance over the retina. The remainder of the vitreous shows little change. The retina is somewhat atrophic. The choroidal vessels are distended with red blood cells. Few leucocytes are visible. Groups of leucocytes are seen in occasional posterior scleral vessels.

Diagnosis: Corneal abscess.

Summary: This unusual pathological picture can be explained by the introduction of organisms of low virulence into the cornea and their growth in this avascular media. The unusual factor is the limitation almost exclusively to the corneal stroma.

A household that has one person ill enough to die from tuberculosis is fertile ground for future cases. Oakes, Marian, Amer. Jour. of Nursing, December 1939.

OFFICIAL PROCEEDINGS

The following are the remaining councilor and committee reports presented at the Eighty-first Annual Session, and not previously published in the Journal. The minutes of the session of the House of Delegates and of the Council will be published in the June issue of the Journal inasmuch as adequate time was not available for their preparation and presentation in this issue.

The following is the report of the Councilor of the Sixth District:

To: THE HOUSE OF DELEGATES:

I am very happy to report that all of the physicians in the Sixth Councilor District have shown 100 per cent co-operation and have given us their hearty support for the past year.

Respectfully submitted,

William P. Callahan, M.D.,
Councilor, Sixth District.

The following is the report of the Councilor of the Eleventh District:

To: THE HOUSE OF DELEGATES:

The eleventh district has passed through a very successful year. The district is composed of seven societies. All of the societies have held regular meeting, and have regularly attended the scientific meeting of our two larger societies.

Our societies are well organized and attendance at their meeting is well over 90 per cent.

Respectfully submitted,

A. C. Armitage, M.D.,
Councilor, Eleventh District.

The following is the report of the Councilor of the Tenth District:

To: THE HOUSE OF DELEGATES:

Considerable time and effort has been expended in calling representatives among the profession throughout the district, in getting the views of the profession relative to the desirability of participating in the F.S.A. health program.

Because of the expressed desire of many it was deemed advisable to have a referendum vote expression of the doctors in the district, the vote being overwhelming as to the probable desirability of such a program, meetings were called for the purpose of completing the arrangements.

The counties in the district have their individual set up, and each is operating under their own formulated fee schedule and membership auditing committee.

The program has apparently not proven satisfactory

in all particulars and it has been expressed by many, unless better arrangements can be made in the future, as the contracts now stand is deemed unsatisfactory both by the doctors and the F.S.A. clients subscribing to the fund and should be discontinued.

An effort has been constantly put forth in this district to improve the political standing of the profession anticipating possible legislation pending that may come up at the coming legislative session.

Our impression is that this has been much worth while, and if such a program could be carried out state-wide most of our legislative worries would be greatly alleviated so far as legislative matters are concerned.

As a result of these close contacts it is felt this district is in a better position for future legislative co-operation than has ever existed before.

Assistance has been rendered the Women's Field Army in their cancer control program, meetings have been held at Hill City, Russell, Wakeeney and Hays.

All meetings have been well attended and great interest was shown by those attending, it would seem the high school groups were most interested, this to me is the most potential field for the spreading proper education where the future results will be most outstanding in our fight to control cancer in our state.

Special effort has been made in popularizing the post graduate programs held throughout the state and in this district the attendance has been better this year than in the past and my reaction is that the program is one that is showing greater popularity among the physicians and many expressions especially this year favorable for the continuance of a program from year to year by those in attendance.

Finally wish to state I have enjoyed being Councilor of the Tenth District while the demands at times have required time and expense, it has been a pleasure in being of some possible assistance in furthering the cause of organized medicine in the State of Kansas.

Respectfully submitted,
C. D. Blake, M.D.,
Councilor, Tenth District.

The following report was presented by Arthur K. Owen, M.D., Chairman of the Committee on Automobile Accidents:

TO: THE HOUSE OF DELEGATES:

This committee has had little activity in this past year. As to just what the physicians of Kansas may be able to do in limiting automobile accidents, is not known to anyone at the present time. The original idea of making them reporters of automobile accidents to the proper civil authorities would help neither the accidents, the patients, or the doctor.

The committee chairman is still waiting to appear before the Advisory Council of the safety section of the Highway Patrol. This has to be done by invitation, and in spite of several offers that invitation to date has not been forthcoming.

A great deal of co-operation between the physicians and the law enforcement agencies may be expected from chemical and laboratory tests of drunkenness. These are well known in all laboratories.

The chairman of the committee believes that articles in the newspapers of the state, concerning the dangers which may come from automobile drivers who see and hear poorly, may be of considerable benefit. He believes that they should appear over the signature either of the county medical society, or of the State Medical Society.

As to how much benefit these things may be to the public at large, will have to be worked out by the method of trial and error, and will take time.

The following report was presented by A. R. Hatcher, M.D., Chairman of the Committee on Hospital Surveys:

TO: THE HOUSE OF DELEGATES:

The committee completed during the year its survey of medical and cult hospitals in the state. Replies were obtained from all counties which had not sent an answer to the questionnaire forwarded last year, and a list was prepared showing the location, type, ownership and number of beds of every hospital in every county. A copy of the list was forwarded to the Council on Medical Education and Hospitals of the American Medical Association and copies are also available in the central office for all members or persons who desire to have them. Since no other agency maintains a complete listing of Kansas hospitals, it is the feeling of the committee that this activity should be periodically continued in future years.

The committee also feels that a survey of Kansas hospital equipment should be conducted during the next several years. It is believed that accurate information of this kind will materially aid the county medical societies in being able to make recommendations for the purchase of equipment necessary to provide good medical service, in eliminating duplication of facilities which are conveniently accessible, and in thereby obtaining more efficient and economic use of medical and hospital equipment.

The committee has continued its study of group hospitalization plans. It has proceeded conservatively and cautiously in this regard, by reason it feels the Kansas problem differs materially from the industrial areas in which most present plans of this kind are being operated. For example, it is rather generally conceded that sales to groups rather than to individuals and that sales on a monthly payment basis are essential in the sound operation of a group hospitalization plan. Both of these elements would undoubtedly present difficult problems in this state. The committee has felt, therefore, that it should continue its studies of this question and that it should await additional experience with plans of this kind before an extensive group hospitalization program is commenced in Kansas. Several local group hospitalization experiments have been commenced in the state during the past year, which, it is believed, will provide considerable information on this subject.

The committee has attempted to co-operate in all ways possible with the Kansas Hospital Association. That organization was successful in passing a hospital lien law at the last session of the Legislature and the Association has aided in numerous other ways in the handling of hospital problems.

TO: THE HOUSE OF DELEGATES

I wish to inform the Society that the following of our members have died during the year on the dates and from the causes described. The report covers the period from January 1, 1939, to April 1, 1940:

Name	Age	Date	Place	Cause of Death
Hutcheson, Robt. Chas.	80 yrs.	Jan. 5	Elk Falls	Cancer of stomach and liver.
Roberts, Marcus C.	61 yrs.	Jan. 6	Hutchinson	Coronary thrombosis.
Clifton, John	74 yrs.	Jan. 16	Shawnee Co.	Myocardial-renal insufficiency.
Hannah, Hubert C.	64 yrs.	Feb. 7	Junction City	Suicide—gun shot wound in head.
Emerson, Frank Garner	77 yrs.	Feb. 7	Wellington	Fall in bathtub—injury to chest. Hypostatic pneumonia.
Janes, George K.	78 yrs.	Feb. 17	Williamsburg	Diabetes mellitus.
Rapp, John Henry	49 yrs.	Feb. 18	Wichita	Crushing of chest in automobile accident.
Leigh, Ebberly J.	78 yrs.	Feb. 18	Hiawatha	Uremia, prostatitis.
Winbigler, Clarence W.	87 yrs.	Feb. 26	Harper	Uremia.
O'Neil, Frank E.	69 yrs.	Mar. 29	Prescott	Lobar pneumonia.
Hertzler, Ralph H.	52 yrs.	Mar. 30	Newton	Coronary occlusion.
Button, Edwin C.	59 yrs.	Apr. 10	Great Bend	Mitral insufficiency.
Douglas, Jay Rufus	52 yrs.	Apr. 12	Osawatimie	Coronary sclerosis.
McNaughten, W. L.	77 yrs.	Apr. 21	Eureka	Uremia, chronic myocarditis.
Candler, Fred D.	64 yrs.	Apr. 27	Merriam	Cerebral arteriosclerosis.
Matchette, Geo. H.	85 yrs.	Apr. 30	McPherson	Congestion of brain.
Ewing, Charles H.	66 yrs.	May 4	Larned	Cerebral hemorrhage.
Nevitt, Rollin Roy	69 yrs.	May 14	Moran	Cholelithiasis — postoperative complications, bro. pneumonia.
Day, Frederick K.	72 yrs.	May 16	Winfield	Chronic myocarditis, atrophy of liver, gall stones.
Terrill, Harold J.	44 yrs.	May 19	Ottawa	Acute miliary tuberculosis.
Davis, Ova Portis	69 yrs.	May 28	Topeka	Cancer of prostate.
Hazlett, Hal H.	65 yrs.	June 4	Topeka	Carbon monoxide poisoning from car exhaust, accidental.
Little, Alonzo W.	60 yrs.	June 8	Wadsworth	Uremia.
Schroeder, William F.	48 yrs.	June 12	Newton	Basal skull fracture, auto accident.
Deaver, Henry J.	73 yrs.	June 19	Sabetha	Lympho sarcoma, inguinal gland.
Keith, Edmond R.	75 yrs.	June 29	Lawrence	Diabetes mellitus.
Nye, Harry Wolfe	66 yrs.	July 6	Osborne	Chronic parenchymatous nephritis.
Brownfield, Haynes	59 yrs.	Aug. 2	Anthony	Carcinoma of bladder.
Roller, Raymond F.	56 yrs.	Aug. 11	Altamont	Cerebral hemorrhage.
Darrah, Percival W.	67 yrs.	Aug. 26	Leavenworth	Cardio-renal-vascular disease.
Reed, Albert E.	58 yrs.	Aug. 30	Larned	Coronary occlusion.
Phillips, Charles E.	62 yrs.	Sept. 11	Dodge City	Angina pectoris.
Mann, Frederick P.	61 yrs.	Oct. 16	Valley Falls	Cerebral hemorrhage.
Marks, George W.	59 yrs.	Oct. 24	Topeka	Chronic endocarditis.
Griswold, J. Lewis	82 yrs.	Oct. 27	Columbus	Chronic prostatitis.
Lewis, Albert B.	82 yrs.	Oct. 28	Emporia	General arteriosclerosis.
Hudiberg, Walter S.	61 yrs.	Nov. 22	Independence	Tularemia.
Olsen, Henry Herman	47 yrs.	Dec. 8	Wichita	Cerebral hemorrhage.
Crume, Ralph O.	56 yrs.	Dec. 9	Fort Scott	Coronary occlusion.
Liston, George	75 yrs.	Dec. 18	Kansas City	Benign prostatic hypertrophy retroperitoneal hemorrhage.
Meyer, Grant	71 yrs.	Dec. 22	Marion	Cerebral hemorrhage.
McLintock, Minda A.	83 yrs.	Jan. 3	Atchison	Exposure to cold, starvation.
Basham, David Walker	85 yrs.	Jan. 18	Wichita	Coronary occlusion.
Harrison, Alvin F.	73 yrs.	Feb. 24	Topeka	Coronary occlusion.
Gaston, Charles Earl	69 yrs.	Feb. 16	Blue Rapids	Cerebral hemorrhage.
McNaught, J. Frank	57 yrs.	Mar. 21	Girard	Coronary occlusion.
Russell, Roy Dean	43 yrs.	Mar. 19	Dodge City	Streptococcal infection, hemolytic streptococcal infection—abrasion on leg.
Fraker, Ray Dayton	43 yrs.	Mar. 18	Garnett	Acute coronary thrombosis with myo-cardial infarction.

May I suggest a few minutes of silence at this time in honor of our departed members.

Respectfully submitted,

J. H. O'Connell, M.D.,

Chairman Committee on Necrology.

The following report was respectfully submitted by F. L. Loveland, M.D., Chairman of the Committee on Medical Economics:

To: THE HOUSE OF DELEGATES:

The committee has spent the major portion of its efforts during the past year on the subject of indigent medical care. The general indigent medical problem was discussed with the Kansas State Board of Social Welfare at several meetings held early in the year at which the Board evidenced great interest in the problem and stated that it would assist in all ways possible. At the request of the Board, Mr. Walter Stumbo, an attorney for the Board, attended a meeting of the committee held on November 26. Discussion was had at that meeting as to ways in which the board could encourage the adoption of county medical society indigent plans in the various counties and as to how it could change its rules and regulations to make the operations of these plans more efficient and practical. Following this meeting numerous conferences have been held with representatives of the Kansas State Board of Social Welfare in an effort to prepare a program of this kind, and we are happy to be able to tell you that a program was approved and released by the Board on May 10 which we believe will have a far-reaching influence on the indigent medical care problem in Kansas and which we also believe comprises one of the most complete and efficient indigent plans in the country. Since the bulletin issued by the board on this subject is self explanatory, we have chosen to attach a copy as an explanation and description of the program. Copies of the bulletin have been sent to the county commissioners in each county and copies will be forwarded to the county medical societies immediately after this annual session. The committee wishes to recommend that each county medical society study this bulletin carefully and that it appoint a committee to investigate possibilities wherein the recommendation contained in the program can be adopted or otherwise utilized in that county. The committee feels that the board has attempted to accomplish everything within its power toward helping physicians in the handling of the indigent problem, and it greatly appreciates the excellent assistance and cooperation the Kansas State Board of Social Welfare has provided in this regard. It also believes it would be a splendid thing if each county medical society would write the board a letter expressing appreciation and complimenting the plan.

The committee has also continued its study of group hospitalization and medical service plans. It is the feeling of the committee that plans of this type are better suited to industrial areas than to agricultural areas and that additional study and experience should be obtained before any state-wide plans of this kind are instituted in Kansas. The committee is also investigating possibilities for interesting private insurance companies in operating plans of this kind in Kansas on a cash indemnity basis.

The committee has had considerable correspondence during the year with Kansas congressional representatives in regard to public health and medical service legislation.

A sub-committee has been appointed to consider

farm and labor medical problems and it is planned that a series of conferences will be held with farm and labor groups on this subject.

The following report was presented by F. J. McEwen, M.D., Chairman of the Committee on the School of Medicine:

To: THE HOUSE OF DELEGATES:

The committee has held one meeting at the University of Kansas School of Medicine, Kansas City, Kansas, on November 5, 1939, as guests of the faculty of the Medical School. Almost 100 per cent attendance of the membership was present. The committee made a tour of inspection of the hospital and medical school, and take pleasure in reporting that great progress has been made during the past year in equipping and putting into operation the new buildings of the hospital and clinic.

A subsequent report by Dean H. R. Wahl will describe in detail the occupation of the new buildings.

The committee was gratified to note the large amount of research work being carried on in the Hixon Memorial Research Laboratories. The third floor of this building, with the assistance of a gift from Dr. and Mrs. Logan Clendenning, has been remodeled into a beautiful library of medical history which will be a credit not only to the University, but to the entire State of Kansas.

Several important problems relative to the School of Medicine and its relationship to the public and to the medical profession were discussed and acted upon as follows:

1. The pre-clinical division of the Medical School at Lawrence, still occupies the scattered, make-shift quarters it has for the past several years. There is an urgent need for a satisfactory pre-clinical building to house this division of the medical school under one roof, and provide satisfactory and adequate facilities for teaching the fundamental sciences which are so necessary for later clinical experience. The committee recommends that the profession in the state lend every assistance to the medical school in accomplishing this objective, which at present, is the greatest need of the medical school.

2. The medical school received over 600 applications for the present freshman class. A committee of faculty members now conducts a personal interview with all qualified students. It has been necessary to eliminate practically all students from outside the State of Kansas, and only three students were taken from Kansas City, Missouri, as a gesture of appreciation for the use of the clinical facilities of the Kansas City General Hospital for teaching purposes. The committee commended the faculty for their earnest efforts to give every qualified applicant from the State of Kansas a just and fair opportunity to enter the medical school solely on the basis of merit. The faculty expressed regret in not being physically able to accommodate twenty-four students who were found to be fully qualified, but could not be placed in the freshman class because of insufficient equipment and material for teaching.

3. The library of the medical school has been receiving a large number of journals from the Editorial Board of the Journal of The Kansas Medical Society.

These journals are received on an exchange basis by the editorial board, and have been, in the past, presented to the library of the medical school where they have been a valuable contribution to the student body, as well as to the profession of the state, who receive the services of the library on a package-loan service. This service has been used fairly extensively by the physicians of The Kansas Medical Society. The committee unanimously passed a resolution thanking the Editorial Board and The Kansas Medical Society for this contribution, and recommends to the council that the books and periodicals received by the Journal shall be placed in the University of Kansas School of Medicine after the editorial board has finished using them.

4. The committee was pleased to find that the officers and staff of the medical school are using every effort to permit the use of the out-patient clinics and the hospital for fully qualified indigents. An occasional difficulty has been encountered due to misunderstandings on the part of physicians, but as a whole, the patients admitted to the clinics and the hospital are fully eligible to receive these services. A full-time social service department has been established to prevent the abuse of these services.

5. The committee is gratified with the progress being made by the medical school in offering post-graduate work to the medical profession of the State of Kansas. This year 130 physicians attended the four-day post-graduate courses offered by the medical school. These courses will be held annually, offering training in the new developments in the practice of medicine for the physicians of the state.

The committee is happy to report to the House of Delegates and the State Society that the medical school of the University of Kansas is making constant progress and improvement. At the present time, there is an urgent need for a new medical building for the pre-clinical division at Lawrence. The plant and equipment at Kansas City, Kansas, is fairly adequate at the present time.

There is a definite need for a dormitory for undergraduate students who are now scattered throughout the city because housing facilities near the medical school are not satisfactory. A consistent good spirit of willingness to co-operate with the medical profession and help in every way toward its betterment has been noted at every meeting of the committee.

Dean Wahl and the entire membership of the faculty and hospital staff are to be commended for their fine work in building a really fine medical school in Kansas.

The following report was presented by E. L. Mills, M.D., Chairman of the Committee on Public Health and Education:

TO: THE HOUSE OF DELEGATES:

1. The committee in past meetings has keenly felt the mechanics, or lack of them, in developing and handling a news release project, radio talks, pamphlets, talk outlines, etc. They have felt that considerable difficulty was involved in the preparation of worthwhile material, the use of proper personalities for radio, etc.

2. Following a consideration of these difficulties

the committee felt that it would be necessary to organize an efficient means of mechanics before the committee could engage in extensive projects of this kind.

3. With this thought in mind, the problem was discussed with the Kansas State Board of Health, to determine the possibilities for instituting a sizeable division of public health information in that organization. In other words, a trained department consisting of five or six persons trained in publicity work who could prepare copy, projects, and other lay educational information, under the direction of this committee.

This has been worked on during the past year. The matter has been presented at each meeting of the Kansas Board of Health, and final approval has not yet been made.

It is thought that no definite progress can be made without an efficient group trained in this type of work. The two ways in which this may be accomplished is in conjunction with the Kansas State Board of Health or the use of Federal funds which may be available.

The following report was presented by L. M. Tomlinson, M.D., Chairman of the Committee on Stormont Medical Library:

TO: THE HOUSE OF DELEGATES:

The committee was assigned the following three projects for consideration during this year:

1. Revision of the present purchase list of Stormont Medical Library.

2. Consideration of the question as to whether the Society should continue to contribute books to Stormont Medical Library.

3. Inspecting of and preparation of recommendations concerning the present use of Stormont Medical Library.

The action taken upon these matters is possibly illustrated in the following minutes of a meeting of the committee held at the state library in Topeka on December 11, 1939:

"Members present were Dr. L. M. Tomlinson, Hareyville, Chairman; Dr. J. M. Mott, Lawrence; and Dr. L. L. Saylor, Topeka. Dr. John M. Porter was present as Secretary of the Society; Dr. Don Wakeman was present as a representative of the Editorial Board, and Clarence G. Munns was present as Executive Secretary of the Society.

"The committee inspected the library, and Miss Louise McNeal, state librarian, presented a report concerning the present status of the Stormont Medical Library fund, the publications and books presently being added to the library, the housing and personnel required to care for the library, and the use of the library.

Dr. Wakeman reported that during the past several years the Editorial Board has loaned the review books which the Journal receives to the Stormont Medical Library, and that it has loaned the Journal exchange periodicals to the library of the University of Kansas School of Medicine. Dr. Wakeman also reported that the Editorial Board feels greater assistance would be afforded to the Kansas profession if the periodicals as well as the books are contributed

to the Stormont Medical Library, and that it has thus decided to offer both for that purpose if the Committee on Stormont Medical Library desires to have them. Clarence G. Munns reported that the Committee on Medical Schools recently adopted an opposite recommendation wherein it was suggested that no further contributions be made by the Journal to the Stormont Medical Library, and that instead all Journal books and periodicals should be forwarded to the library of the University of Kansas School of Medicine. Following a discussion of this topic it was moved by Dr. Mott, seconded and carried, that the Stormont Medical Library Committee will accept the loan of the periodicals and books offered by the Editorial Board, and that if this change in procedure will inconvenience the University of Kansas School of Medicine the committee will authorize a loan of the periodicals for a period to be agreed upon not exceeding one year to enable the Kansas University School of Medicine to make other arrangements for periodical purchases.

"The committee instructed the central office to report this recommendation to the council, and to request a hearing on behalf of the committee if the council desires to inquire into the action taken. If the recommendation is approved by the council the central office was asked to communicate with Dean H. R. Wahl of the University of Kansas School of Medicine in regard to the change in procedure of the handling of the Journal periodicals.

"The suggestion was made to the Editorial Board that all Journal books and periodicals placed in the Stormont Medical Library should bear the following designation, 'Loaned to the Stormont Medical Library by The Kansas Medical Society.'

"The central office was also asked to discuss with Dr. F. P. Helm, secretary of the Kansas State Board of Health, the possibility of obtaining Kansas State Board of Health funds for improvement and extension of the facilities of the Stormont Medical Library.

"Adjournment followed."

Since that time the question of the placement of Journal review books and exchange periodicals was submitted to the council. The council ruled that final decision in this regard should be delegated to the Editorial Board, and recommended that the Editorial Board, the Committee on Medical Schools and the Committee on Stormont Medical Library hold a joint meeting in an effort to obtain an amicable solution of the question. In accordance for representatives of these three committees to meet during the present annual session.

A suggestion has also been received by the committee that it might be advisable to move the Stormont Medical Library to the University of Kansas School of Medicine and to thereby consolidate the two largest medical libraries in the state. An investigation of possibilities in this connection seems to indicate that this would not be legally permissible, by reason that the trust agreement under which the Stormont Medical Library was founded irrevocably requires that the library shall be housed in the State House.

Representatives of the committee have also conferred with the Kansas Supreme Court, which body has supervision of the State Library, in regard to obtaining additional and better facilities for the hous-

ing of the Stormont Medical Library. The court has evidenced interest in this and has offered all assistance it can provide. Consideration is being given at the present time to the possibility of providing a separate department, a separate room and a separate librarian for the library.

The committee feels that Miss Louise McNeal, the state librarian, has provided excellent assistance in the management of the library, that the present purchases being made from the income of the trust fund represent a judicious selection, and that with the contributions being made by the Editorial Board the Stormont Medical Library can be developed into an excellent source of scientific books and periodicals.

TO: THE HOUSE OF DELEGATES

The Editorial Board submits the following report for the period from May 1, 1939, to May 1, 1940.

The financial statement for the Journal showing all income and expenses to and including the April 1940 issue reflects the following condition:

FINANCIAL REPORT OF THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

May 1, 1939 to May 1, 1940

Cash in Bank (as of May 1, 1940, not including total income and expense for the April 1940 issue)	\$1,339.96
Checks Deposited May 1940, not included in Bank statement	81.86
	<u>\$1,421.82</u>

STANDING OF THE JOURNAL FUND (Including the April Issue)

Assets:		
Cash in Bank	\$1,421.82	
Good Accounts Receivable	465.48	
Postage and P.O. Deposits	40.00	
	<u>\$1,927.30</u>	\$1,927.30
Liabilities:		
Accounts Payable (Printing and Engraving April issue)	\$ 428.81	\$ 428.81
		<u>\$1,498.49</u>
INCOME: From May 1, 1939 to May 1, 1940		
Advertising	\$5,809.97	
Subscription and Misc.	119.62	
	<u>\$5,809.97</u>	\$5,809.97
EXPENSES: For May 1, 1939 to May 1, 1940		
Printing	\$3,597.29	
Engraving	201.99	
Postage and Mailing Journals	250.00	
Salary (Two in June)	1,298.00	
Misc. Expenses	153.29	
Drayage	8.25	
	<u>\$5,508.82</u>	\$5,508.82
		<u>\$ 301.15</u>

The surplus of \$301.15 shown for the past year may be compared with the surplus of \$297.79 as shown for the year of 1938-1939. Likewise the balance on hand of \$1,421.82 may be compared with the balance of \$1,245.27 of a year ago.

The Journal pays for its own stationery, supplies and

stamps, the salary of its full time employee, the publishing and mailing of the Journal, and an attempt is made in every way to see that the publication is maintained on a self-supporting basis.

The regular sections of the Journal which include Cancer Control; Eye, Ear, Nose and Throat; Medical Economics; Tuberculosis and Auxiliary have been continued through the year and these have largely been supervised by various Society committees.

The books received for review purposes are donated to the Stormont Medical Library. Exchange publications have been forwarded to the Library of the University of Kansas School of Medicine, in Kansas City. The Board is giving consideration to placement of Journal exchange periodicals and review books, so that an adequate medical library will be at the disposal of all physicians throughout the state.

The Editorial Board believes that Kansas members can and should prepare a larger number of scientific papers, not only for the Journal but for other medical publications. Any assistance secretaries of county medical societies and other members can give in this direction will be greatly appreciated.

It is the desire of the Editorial Board that the Journal shall improve the quality of the scientific material and cover fully the interests and activities of our members. Any criticism or suggestions which the House of Delegates, the Council, officers or members of the Society may care to make will be gladly received by the Board.

Respectfully submitted,

W. M. Mills, M.D.

Chairman Editorial Board

NEWS NOTES

NARCOTIC PERMITS

The United States Circuit Court of Appeals ruled on May 11 that the motion for rehearing filed by the osteopaths in the case of Kansas State Osteopathic Association vs. William H. Burke, Collector of Internal Revenue, should be denied.

This therefore completes all avenues of litigation in that case with the exception of a possible appeal to the United States Supreme Court.

EXHIBIT AWARDS

An innovation at this year's annual session was the presentation of awards for merit of scientific exhibits. The grand award was presented to Dr. C. A. Hellwig, of Wichita, and honorable mention awards were given to Dr. V. L. Pauley, of Wichita, and Dr. R. O. Speirs, of Dodge City.

Dr. Hellwig's exhibit was on "The Colloid Goiter" and Dr. Pauley's and Dr. Speirs' on "Kidney Pathology" and "Immediate Repair of Tendons" respectively.

EDITORIALS

It is believed that the following editorials pertaining to socialized medicine which were published in two prominent Kansas newspapers will be of interest to all members.

CAPPER BLUNDERS

Yesterday we read again, "Senator Capper never guesses wrong."

Immediately we recalled an old saw about the pitcher that goes too often to the well being broken. We were thinking about United States Senate Bill No. 3660, "to aid in the establishment and administration of state health insurance plans," introduced by the Kansas last month.

It seems we are to have more New Deal schemes although the New Deal already has the country more than busted and employers of labor so discouraged they are quitting business or trying to unload their burdens.

On the face of things a bill to pay people when they are sick and take care of them seems to be very much "for the people." But this bill applies only to industrial workers, which means that farmers and unorganized workers in agricultural communities will pay the tax and receive no such benefits.

The bill is so framed as to make the public and the worker again think the employer is being "struck," which he is. A worker who draws from \$20 to \$25 a week and has three dependents pays 30 cents a week, his employer pays 40 cents, the state pays 45 cents and the Federal Government pays 23 cents. The employee will draw a cash benefit of \$14.50 a week while he is ill and also be cared for. It's no go unless he is sick six days. In Germany where such a plan is being tried nearly all who get sick are sick six days and there is more absence from work on account of illness than ever before.

The bill is popular with organized labor and in the large cities. It will be anathema out in the rural districts if the farmers get wise. The bill originated with Abraham Epstein of the American Association for Social Security of New York City and was drawn by Professor Herman Gray of the New York University law school. It is more New Deal, means more public debt, means another burden on industry, business and agriculture.

Senator Capper, take your place at the right hand of FDR.—Lyons Daily News.

HEALTH IN HARD TIMES

Persistent efforts continue in Washington to change radically the whole system of caring for the sick, as we have always known it. The broad purpose is nothing less than the shifting of responsibility from its three-fold traditional base—the individual, the medical profession and the local community—to the Federal and state governments.

Before that change is effected, Americans want to know what they would gain by it and what they would lose. The burden of proof is on the proponents of political medicine.

The fact is that health has never before in the history of the nation been so good as it is right now. The average expectancy of life is the greatest ever enjoyed by any great people since the fabled Methuselah. Between 1900 and 1937 it was lengthened by twelve years. The death rate has fallen in 100 years from twenty-seven per thousand to a low point of 11.2, and compares favorably with any of the large nations of the world. The ravages of tuberculosis, typhoid, diphtheria and pneumonia are decreasing. Infant and maternal mortality rates are lower than ever before.

Public health has not been affected by the depres-

PACKED WITH SOLUTIONS TO **YOUR** PROBLEMS

PRACTICE of ALLERGY

By **WARREN T. VAUGHAN**

Director of the Vaughan-Graham Clinic,
Richmond, Va. 1082 pages, 338 illustrations. Price, \$11.50.

Dependable information which would break through the veil of mystery surrounding allergy has been sought for years. With the apparent increase in allergic problems the demand for more exhaustive data on all phases of allergic disturbance has increased. This new book gives new methods of diagnosing and treating allergy problems. Information is given in this book that will help you to bring relief to the 10 to 50% of your patients now suffering from allergic disorders. This information is up-to-the-minute and the methods recommended are those which the author has found effective.

CONTENTS

- Part I—Steps in the Development of Our Present Understanding of Clinical Allergy
- Part II—The General Characteristics of Clinical Allergy
- Part III—The Physiology of Allergy
- Part IV—Allergic Diagnosis
- Part V—The Diagnosis and Treatment of Food Allergy
- Part VI—Food Allergens
- Part VII—Pollens and Pollinosis, and Other Inhalant Allergy
- Part VIII—Bacteria
- Part IX—Fungi
- Part X—Entomeogenous and Percutaneous or Diadermal Allergy
- Part XI—Anaphylactic Shock
- Part XII—Drugs
- Part XIII—Contact Allergy
- Part XIV—Physical Allergy
- Part XV—Pharmacology
- Part XVI—The Allergic Diseases

DISEASES of the SKIN

Sound and effective treatment is featured throughout the new Tenth Edition of this popular book. A special chapter of 48 pages is devoted to treatment, but, as each skin condition is discussed, symptoms, etiology, pathology, diagnosis, and TREATMENT are given in detail.

Description of all significant entities, syndromes, and concepts, and of many exotic, unusual, and even exceptional dermatoses have been included.

By **RICHARD L. SUTTON** and **RICHARD L. SUTTON, JR.**

1549 pages, 1452 illustrations, 21 color plates.
Price, \$15.00.

The C. V. MOSBY COMPANY,
3525 Pine Blvd., St. Louis, Mo.

KMJ 5-40

Gentlemen: Send me:— ☐ Vaughan's "PRIMER OF ALLERGY" priced at \$11.50.
☐ Sutton's "DISEASES OF THE SKIN" priced at \$15.00.

Dr. _____

Address _____

sion, says Nation's Business. In fact the improvement actually accelerated during the years following 1929. From 1930-34 the mortality from tuberculosis declined each year by approximately 6 per cent under the preceding year. In spite of all the inspired croaking to the contrary, the best medical authorities are agreed that malnutrition has not increased.—Topeka Daily Capital, May 19, 1940.

TRANSPORTATION

The Illinois State Medical Association has scheduled a special train for members attending the A.M.A. Convention in New York. The train will leave Chicago at 11:00 A.M. on Sunday, June 9, and will arrive in New York at 6:45 A.M. on Monday, June 10. The Illinois State Medical Association has invited all Kansas members to use the facilities of this train if they desire to do so.

The Missouri State Medical Association is also considering a special train to the meeting from St. Louis. Any Kansas members desiring to co-operate with this organization many contact Mr. E. H. Bartlesmeyer, Executive Secretary, Missouri State Medical Association, 623 Missouri Building, St. Louis, Missouri.

APPOINTMENTS

Gov. Payne H. Ratner announced on May 1 the following re-appointments to the Kansas State Board of Medical Registration and Examination: M. C. Ruble, M.D., of Parsons, and H. E. Haskins, M.D., of Kingman.

RESIGNATION

Dr. Ralph Fellows announced that he would resign his position as superintendent at the State Hospital at Ossawatimie, to be effective on May 30. Dr. Fellows has accepted a position in the Milwaukee County Hospital for Mental Diseases, in Milwaukee, Wisconsin. The Kansas State Board of Social Welfare has not yet announced his successor.

INDIGENT CARE

The Kansas State Board of Social Welfare released a bulletin on May 11 which should prove to be of particular assistance to the counties in the handling of indigent medical care problems.

The bulletin among other things approves state financial participation in county medical society indigent plans and authorizes methods of procedure wherein state participation can be more efficiently obtained in the provision of medical service to Social Security Act clients and similar categories.

The Society central office is presently preparing a bulletin on this subject which will be forwarded with copies of the Kansas State Board of Social Welfare bulletin to the county medical societies within the near future. Both bulletins will be published in the June issue of the Journal.

COUNTY SOCIETIES

The Bourbon County Medical Society met in Fort Scott on April 1. Guest speakers were Dr. G. Wilse Robinson and Dr. C. W. Lowry, both of Kansas City, Missouri.

The Central Kansas Medical Society held its quarterly meeting at Hays on March 4. Speakers were: Dr. Charles E. Walker, Jr., of Denver, Colorado, who spoke on "Eye Conditions of Interest to the General Practitioner;" Dr. Warren W. Tucker, of Denver, who spoke on "X-Ray Diagnosis of Placenta Previa" and Dr. Daniel R. Higbee, of Denver, who spoke on "Tumors of the Kidney."

The Cloud County Medical Society held an election of officers at its meeting on March 14 in Concordia. Dr. H. R. St. John, of Concordia, was elected President; Dr. C. O. Anderson, of Concordia, Vice-President; Dr. E. N. Robertson, Jr., of Concordia, Secretary-Treasurer. Dr. Raymond Gelvin was chosen as delegate. Speakers for the evening were: Dr. C. A. Hellwig, of Wichita, and Dr. Vincent Scott, of Wichita.

The Cowley County Medical Society held a meeting on April 18 in Winfield. Dr. George Gsell, of Wichita, spoke on "Evaluation of Ocular Discomfort."

The Ford County Medical Society held a meeting in Dodge City on March 8. Dr. John Dillon, of Larned, was the speaker.

The Golden-Belt Medical Society held the fifty-first annual meeting of that society on April 4 in Junction City. Dr. E. H. Skinner of Kansas City, Missouri, spoke on "Treatment Management of Cancer of Uterine Cervix;" Dr. Manuel Grodinsky, of Omaha, Nebraska, spoke on "Infection of the Hand and Foot;" Dr. Robert Carr, of Junction City, spoke on "Lipoid Pneumonia With Case Reports" and Dr. L. L. Saylor, of Topeka, spoke on "Gas-bacillus Infection." New officers elected at the meeting were: Dr. Lucius E. Eckles, of Topeka, President; Dr. E. R. Gelvin, of Concordia, Vice-President; and Dr. Robert M. Carr, of Junction City, Secretary.

The Harvey County Medical Society held a dinner meeting May 6 in Newton. Speakers for the evening were Dr. V. E. Chesky, Dr. L. E. Peckensneider and Dr. D. V. Conwell.

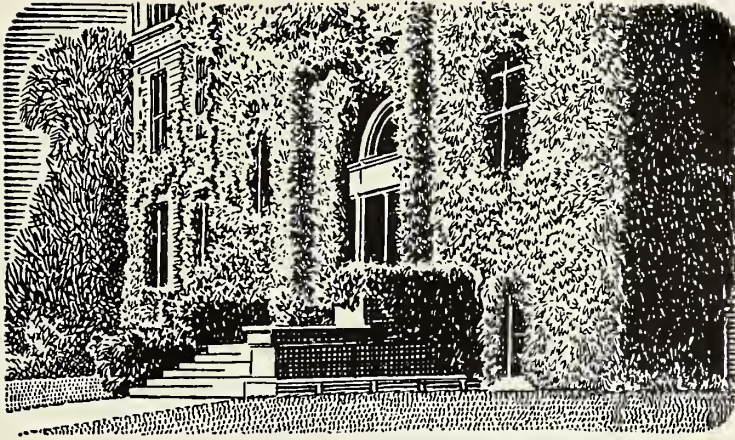
The Lyon County Medical Society held a meeting on May 7 in Emporia. The speakers were: Dr. Thomas P. Butcher, of Emporia, whose subject was "Surgery" and Dr. Clyde O. Meredith, Jr., of Emporia, who spoke on "Obstetrics."

The Montgomery County Medical Society met on April 19 in Coffeyville. Dr. W. A. Meyers, of Kansas City, Missouri, gave a talk on "Heredity Transmission of Familial Diseases" illustrated by lantern slides.

The Pawnee County Medical Society held an election of officers at its meeting on March 11 in Larned at which Dr. C. M. Starr, of Larned, was elected as president; and Dr. C. E. Sheppard, of Larned, as secretary-treasurer. Dr. J. A. Blount, of Larned, gave a paper on "Benefits of a Standard Milk Ordinance in Larned" at the meeting.

The Shawnee County Medical Society held a symposium on carcinoma of the stomach at a meeting in Topeka on May 6. Speakers were: Dr. F. C. Taggart, of Topeka; Dr. A. K. Owen, of Topeka, and Dr. W. M. Mills, of Topeka. Dr. Earl C. Padgett, of the Department of Surgery of the University of Kansas Hospitals, was the guest speaker at the April meeting of the society.

The Southeast Kansas Medical Society held a dinner meeting in Chanute on March 21 at which the wives of members were guests. Speakers were: Dr. E. O. Parsons,



Research Laboratories—Parke, Davis & Company

You can't start building half-way up

Productive research is like building with brick—one fact or one experience is laid on top of another. The soundness of research accomplishment depends on the foundation underneath. You can't start building half-way up.

Parke-Davis contributions to modern medicine are familiar—among them are Adrenalin, Pituitrin, Pitocin and Pitressin, Mapharsen, Meningococcus Antitoxin. Each represents a single research project. Yet all are mortared together in a broad foundation of scientific understanding and experience. Every future Parke-Davis development will stand soundly on this structure.

PARKE, DAVIS & COMPANY



PIONEERS IN RESEARCH ON MEDICINAL PRODUCTS

of Kansas City, Missouri, who spoke on "Surgical Aspects of Duodenal Ulcers" and Dr. Clifford Jones, of Kansas City, Missouri, who spoke on "X-Ray Aspects of Duodenal Ulcers."

The Tri-County Medical Society held a dinner meeting on April 10 in McPherson. Speakers were: Dr. E. H. Hashinger of Kansas City, Missouri, whose subject was "Hypo-Thyroidism" and Dr. Morris Polsky of Kansas City, Missouri, who spoke on "Controlling Skin Diseases With Newer Drugs."

The Wyandotte County Medical Society held a meeting on May 7 in Kansas City. Dr. Logan Clendenning, of Kansas City, Missouri, spoke on "Medical Literature and the Modern Practice of Medicine." Speakers for the May 19 meeting will be Dr. H. W. King, of Kansas City, and Dr. J. H. Luke, of Kansas City.

MEMBERS

Dr. Sylvia Allen of the Menninger Clinic at Topeka and Dr. Henry N. Tihen, of Wichita, were guest speakers at the Seventh Annual Spring Clinic presented by the Pueblo County Medical Society on May 9 and 10 in Pueblo, Colorado. Dr. Allen spoke on "Psychiatry in Internal Medicine" and Dr. Tihen spoke on "Peptic Ulcer—Problems and Management."

Dr. James D. Bowen, of Topeka, is attending a post-graduate course in surgery at the Cook County Hospital in Chicago, Illinois.

Dr. Theodore F. Clark has established a new office in Waverly. He formerly practiced in Baldwin.

The April, 1940 issue of the publication "Radiology" carried a brief report of the article, "Coarctation of the Aorta—Case Report" by Dr. E. Robert Schwartz, of Manhattan, and Dr. G. M. Tice, of Kansas City, which was published in the August, 1939, issue of the Journal.

The April, 1940, issue of the Ohio State Medical Journal carried an excerpt of the article, "Nephritic Edema," by Dr. Robert Jeffries, of Atchison, which was published in the December, 1938, issue of the Journal.

The March issue of the International Medical Digest printed an excerpt of the article, "Lead Encephalopathy," by Dr. Donald N. Medearis, of Kansas City, which was printed in the January, 1940, issue of the Journal.

Dr. C. C. Nesselrode, of Kansas City, recently was elected president of the Kansas City Association of Railway and Industrial Physicians and Surgeons for 1940.

Dr. Hal Powers, of Topeka, is in Washington, D. C., where he is attending a course in ophthalmology at George Washington University.

The American College of Physicians of Philadelphia announced the election of Dr. James Stewart, of Topeka, as fellow of that society.

Dr. Don Wakeman has returned to Topeka after attending a post-graduate course in medicine at the University of Michigan, Ann Arbor.

DEATH NOTICES

Dr. Ray Dayton Fraker, 43 years of age, of Garnett, died of acute coronary thrombosis on March 18 at the

Veterans' Administration Hospital in Wichita. Dr. Fraker was born in Garnett on May 28, 1896; he served in the United States Army during the World War, and he attended the University of Kansas in 1922 and 1923. He later returned to the University to attend medical school from which he was graduated in 1935. Dr. Fraker was a member of the Anderson County Medical Society.

Dr. Roy Dean Russell, 43 years of age, died on March 19 in Dodge City. Death was caused by a streptococcal infection and a gas bacillus infection resulting from an abrasion on the knee. Dr. Russell was born in Great Bend on July 6, 1896. He received a Bachelor of Arts degree from the University of Kansas in 1919, and was graduated from the University of Pennsylvania School of Medicine in 1922. He had practiced in Dodge City for the last ten years. He was a member of the Ford County Medical Society.

Dr. Joseph Frank McNaught, 57 years of age, died on March 27 of heart disease in Girard. He was born in McClain County, Illinois, in 1882. He was a graduate of the University Medical College of Kansas City in 1906 and had practiced in Girard for more than thirty years. He was a member of the Crawford County Medical Society.

Dr. William Eugene Mowery, 55 years of age, of Salina, died of heart disease on March 6 at Orlando, Florida. Dr. Mowery was born in Iowa in 1884 and was graduated from the University Medical College of Kansas City in 1909. He was a member of the Saline County Medical Society.

BOOK REVIEWS

THE TREATMENT OF FRACTURES—Charles Locke Scudder, M.D. The eleventh edition is an excellent and authoritative book brought up to date with the inclusion of the latest methods used in the treatment of fractures.

There are forty-four chapters with over seventeen hundred illustrations. Many of the chapters are written by well-known surgeons and specialists. The first few chapters give general principles in the treatment of fractures. Chapter six "Epiphyseal Injuries" by Dr. Aitken is a recent interesting and original piece of work which has received wide recognition. Dr. Aitken has proven by serial x-ray films the ability of certain dislocations of the epiphysis to correct themselves by change in direction of bony growth. He has also explained the types which do poorly regardless of type of treatment.

Chapter ten, eleven, and twelve deal with normal bone union and describe bone growth both normal and pathological.

Chapter thirteen describes several methods of treatment of compound fractures. I feel that the Carrel Dakin is the most satisfactory by all odds.

In Chapter nineteen the author describes open reductions, among them the use of Sherman bone plates and screws. Dr. Scudder advises the use of the gloved finger in identifying the position of the fracture. Dr. Wm. O'Neil Sherman himself considers this a bad break in technique and rarely necessary. Later chapters give surgical anatomy and approaches for operation on various bones of the body.

Chapter twenty-one, describing treatment of fractures about the face by the famous plastic surgeon Dr. Kazanjian, is excellent and of special interest to the oral surgeon.

The later chapters are devoted to the treatment of specific fractures and the last few chapters to the treatment of non union and medical legal relations in fractures.

The author has described most of the modern methods

In Depressive States

Our recent publication, "Benzedrine Sulfate Tablets in Depressive Conditions"—examined and found acceptable by the Council on Pharmacy and Chemistry of the American Medical Association—summarizes the findings of leading investigators as to the present status of the drug in this field. Excerpts are cited from the articles listed below:

Guttman, E. and Sargent, W.: Observations on Benzedrine—Brit. Med. J., 1:1013, May 15, 1937.

Nathanson, M. H.: The Central Action of Beta-aminopropylbenzene (Benzedrine)—J.A.M.A., 108:528, Feb. 13, 1937.

Myerson, A.: Effect of Benzedrine Sulfate on Mood and Fatigue in Normal and in Neurotic Persons—Arch. Neurol. & Psychiat., 36:816, Oct., 1936.

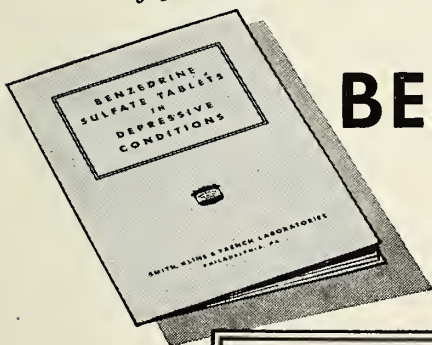
Wilbur, D. L.; MacLean, A. R. and Allen, E. V.: Clinical Observations on the Effects of Benzedrine Sulphate—Proc. Staff Meet. Mayo Clin., 12:97, Feb. 17, 1937.

Woolley, L. F.: The Clinical Effects of Benzedrine Sulphate in Mental Patients with Retarded Activity—Psychiatric Quart., 12:66, January, 1938.

Davidoff, E. and Reifenshtein, E. C., Jr.: The Stimulating Action of Benzedrine Sulfate—J.A.M.A., 108:1770, May 22, 1937.

Guttman, E.: The Effect of Benzedrine on Depressive States—J. Ment. Sci., 82:618, Sept., 1936.

If you did not receive a copy, we shall be glad to mail one to you.



BENZEDRINE SULFATE TABLETS



Each 'Benzedrine Sulfate Tablet' contains amphetamine sulfate, S. K. F., 10 mg. (approximately 1/6 gr.)

SMITH, KLINE & FRENCH LABORATORIES

109 North Fifth Street, Philadelphia, Pa.

EST.  1841

Please send me a copy of your booklet, BENZEDRINE SULFATE TABLETS IN DEPRESSIVE CONDITIONS.

Name _____ M.D.

Street _____

City _____ State _____

SA

used in the treatment of fractures and has carefully and conservatively evaluated the various methods. This book is authoritative and the methods described in the treatment of fractures can confidently be followed. The book is well illustrated and should fill a place in the general practitioner's and specialist's library. C.B.T.

ACCEPTED FOODS, AND THEIR NUTRITIONAL SIGNIFICANCE—Published by the Council on Foods of the American Medical Association. Cloth, Price, \$2.00 postpaid. Pp. 512; Chicago: American Medical Association, 1939. Accepted Foods, and Their Nutritional Significance contains descriptions and detailed information regarding the chemical composition of more than 3,800 accepted products, together with a discussion of the nutritional significance of each class of foods. The book provides also the Council's opinion on many topics in nutrition, dietetics and the proper advertising of foods.

This book will be a welcome reference book for all persons interested in securing authoritative information about foods, especially the processed and fabricated foods which are widely advertised. The accepted products are classified in various categories; fats and oils; fruit juices, including tomato juice; canned and dried fruit products; grain products; preparations used in the feeding of infants; meats, fish and sea foods; milk and milk products other than butter; foods for special dietetic purposes; sugars and syrups; vegetables and mushrooms; and unclassified and miscellaneous foods, including gelatin, iodized salt, coffee, tea, chocolate, cocoa, chocolate flavored beverage bases, flavoring extracts, dessert products, baking powder, cream of tartar, baking soda, cottonseed flour. There is a suitable subject index as well as an index of all the manufacturers and distributors of food products that stand accepted by the Council on Foods.

Accepted Foods is indispensable for the library of every physician concerned with foods and nutrition.

HUMAN PATHOLOGY—Howard T. Karsner, M.D. Published by J. B. Lippincott Co., Philadelphia. 1013 pages, 18 illustrations in color and 443 in black and white. Fifth Edition. An excellent general pathology covering the field of pathology as usually seen by general practitioner and pathologist. The book has a good classification of the various diseases under systemic pathology, listing the various pathological changes in a single organ. Newer material in this edition cover hematopoietic diseases, nervous disorders and the cardio-vascular system. This book is recommended to anyone interested in pathology. J.L.L.

UROLOGY—Daniel N. Eisendrath, M.D., and Harry C. Rolnick, M.D. Fourth Edition, published by the J. B. Lippincott Company, Philadelphia, Pennsylvania, 1938. This is a well written book, which reads easily and which covers the subject of urology in a well balanced form. As stated in its preface, it is intended for the medical student and for those who wish to become acquainted with modern urology in its entirety. Accordingly, its chapters on embryology, anatomy, and physiology, are up-to-date, and rather complete. While most of the surgical procedures, embracing transurethral resections and endoscopic procedures, including radium implants, are mentioned, they are not dwelt upon in great detail, so as to make the book unduly balanced in this respect. Its chapters include the modern conception of gonorrhea and syphilis, and modern pathological conception of tumors arising in the

G-U tract. The book includes a very interesting chapter on the various types of catheters, sounds; their structure and calibration according to the English, French, and American systems. The authors have done an immense amount of work in arranging this book, and seem to give, not only their views, but those held by other authorities in the field. B.M.M.

PRACTICAL MICROBIOLOGY AND PUBLIC HEALTH—William B. Sharp, M.D., Published by C. V. Mosby, St. Louis, Missouri. Price \$4.50. This text is intended primarily as a laboratory handbook for the student of medical bacteriology, and as such seems adequately designed to fulfill its function. The material is arranged on the basis of a working schedule requiring fourteen two-hour periods in the laboratory for each of the first five parts into which the manual is divided; the remaining three parts do not carry exactly timed working schedules, but are intended to cover field work.

Each of the eight parts is subdivided into eleven to sixteen sections, to such effect that the Table of Contents makes an excellent working outline of the entire course.

One of the best features is the provision forms for reporting the results of the experiments, which are bound as part of the text, and provide a permanent record of the experimental results.

The index is adequate, but the photographs which provide profuse illustration frequently leave much to be desired in the matter of clarity.—A.G.

TRAUMA AND INTERNAL DISEASE—Frank W. Spicer. Published by J. B. Lippincott Co., Philadelphia.

The author states in his introduction that the purpose of the book ". . . is to present a carefully study of the role of trauma as an etiologic factor in the causation of disease of the viscera and bodily structures, and a discussion of the etiology, pathology, clinical processes and end-results of serious or apparently trivial injuries, together with their early or tardy manifestations and effects upon a healthy organ or structure and also upon organs or structures that present evidence of preexisting disease. . . . What have been considered to be the most important conditions following trauma are discussed in this book.

". . . the present volume is in no sense a book on traumatic surgery. . . . the treatment of penetrating wounds herein is merely incidental to recognition that such traumata are prolific causes of injury. . . . Most of the discussion and most of the case histories in the book are devoted to non-penetrating injuries, their mechanics, symptoms and end-results."

There is a detailed consideration of the diseases of all the organic systems and their relation to trauma—either recent or long preceding the onset of the symptoms. Part of the book is concerned with those conditions which most physicians recognize as having some relation to trauma, but there is a large part which is devoted to a discussion of numerous conditions which are not commonly considered in this group. The author has more than the usual amount of enthusiasm in searching for traumatic etiological factors for disease, especially when the qualification is so oft repeated that the trauma might have been received recently ". . . or several years before the onset of symptoms."

There is a detailed discussion of the effect of trauma in "developing" symptoms in an organ which which previously had some disease present—a type of effect with which we are all familiar on certain occasions, but it is

Karo Formulas for Safe Weaning

Karo . . 2 tsps.
Milk . . 6 ozs.
Water . . 2 ozs.

This is a formula for *gradual weaning*. The KARO mixture is first offered in place of one breast feeding for a week, then in place of two breast feedings the next week until complete weaning.

Karo . . 3 tblsps.
Milk . . 24 ozs.
Water . . 8 ozs.

This is a formula for *immediate weaning*. The KARO mixture is divided into 4 feedings, 8 ounces each, at 4-hour intervals, and gradually concentrated as the baby becomes adjusted to bottle feeding.



*Inquiries from Physicians are invited
 ...for further information write*

CORN PRODUCTS SALES COMPANY
 17 BATTERY PLACE • NEW YORK CITY

emphasized throughout that it may be a period "of years" following the trauma before the symptoms or the objective findings are manifest. Granting that there is a factor of exacerbation of pre-existing disease possible as a result of trauma, it seems that symptoms or objective findings should develop rather promptly after a trauma to be considered a result of the trauma. And when such diseases as pneumonia, a thrombosis distant from the site of the trauma, pulmonary embolism, such heart diseases as coronary thrombosis and myocarditis, nephritis, tuberculosis of the kidney, diabetes mellitus, diabetes insipidus, and leukemia, are considered due to trauma, and when it is stated that they "... may not appear for one or two years" following the trauma, it seems to this reviewer a little "far fetched."

The impression received in going through the book is that the author would consider anything might be due to trauma if there is any possible history of injury—recent or otherwise. For example, in the summary of the chapter on "Trauma and Diabetes," he says:

"Trauma may cause (1) diabetes mellitus, (2) a glycosuria, (3) diabetes insipidus. Following trauma, diabetes mellitus may be aggravated; a so-called latent diabetes may become manifest or a diabetes mellitus may be initiated. Cases have been reported following (1) pancreatic injury, (2) brain injury, (3) peripheral body injury, and (4) psychic shock. The symptoms may appear within two days or may not appear for one or two years."

It is true that we, as physicians examining workmen after some trauma, must be careful to allow them due compensation for injury, but it seems that there should be a little discretion mixed in with the possibilities in order to reach a decision which is fair to all parties concerned. If this book were to be accepted as an authority in court proceedings, and were followed to its ultimate ramifications, it would almost mean that any workman who became ill during or following any employment in which he could remember any injury, however trivial, might be awarded judgment for permanent disability resulting from the accident. Should such a situation become a reality, the insurance companies carrying workmen's compensation insurance would either have to increase their premiums to a prohibitive level or become bankrupt.

In the opinion of this reviewer, this volume might become a vicious tool in the hands of unscrupulous individuals, although he does not presume to suggest that it was written with any such intention. It is the expression of opinion of an ultra-enthusiast, based on the results of a wide study of the world's literature for unusual case reports, and places far too much emphasis on the "possible," and not enough on the "probable" sequelae of trauma. —O.R.C.

ANNOUNCEMENTS

Plans for a Pan-American Congress of Ophthalmology to be held at the Hotel Cleveland, in Cleveland, Ohio, on October 11-12 have been announced. The congress will be sponsored by the American Academy of Ophthalmology and Otolaryngology, an organization of more than 2,500 specialists in diseases of the eye, ear, nose and throat, and will precede the Pan-American gathering. The congress is open to any ophthalmologist who wished to register.

The sixty-ninth annual meeting of the American Public Health Association will be held in Detroit, Michigan, October 8-11, with the Book-Cadillac Hotel as headquar-

ters. The Michigan Public Health Association, the American School Health Association, the International Society of Medical Health Officers, the Association of Women in Public Health, and a number of other allied and related organizations will meet in conjunction with the association.

The annual meeting of the American Public Health Association is the largest and most important health convention held on this continent. It will bring 3,500 health officials to Detroit for a series of scientific meetings covering all phases of health protection and promotion. A health exhibit will be held in connection with the meeting and an Institute on Health Education is scheduled prior to the official opening. Dr. Reginald M. Atwater is executive secretary of the American Public Health Association, with offices at 50 West 50th Street, New York City.

The old autopsy house where Osler worked at Blockley has been restored as the Osler Memorial Building, and will be dedicated on the grounds of the Philadelphia General Hospital, at Curie Avenue, near Thirty-fourth and Pine Streets, Philadelphia, Pa., at 2 p.m. on June 8, 1940. Original furnishings, including the necropsy table, have been collected. The painting by Dean Cornwell, N.A., of New York, entitled, "Osler at Old Blockley," later to be hung in the building will be on exhibition during the celebration. There are facilities in the building for the housing and preservation of relics of old Blockley, as well as Osleriana. The committee would welcome any additions to this collection. A cordial invitation is extended to those who are interested, and especially those who are planning to attend the American Medical Association Convention in New York City, June 10th to 14th.

The American Medical Golfing Association's Twenty-sixth Annual Tournament will be held at Winged Foot Golf Club, Mamaroneck, New York, Monday, June 10, 1940. Some 250, out of the 1,360 Fellows of the A.M.G.A., are expected to take part at Winged Foot in the 36-hole competition. Each contestant will play both courses. The hours for teeing off are from 7:00 a.m. to 2:00 p.m. The sixty prizes, in the nine events, will be distributed after the banquet at the club-house at 7:00 p.m. All members of the A.M.A. are eligible for Fellowship in the A.M.G.A.

The American College of Chest Physicians will hold their Sixth Annual Meeting at the Biltmore Hotel in New York City, on June 8-10, 1940.

AUXILIARY

PRESIDENT'S ADDRESS

This story of a young surgeon was told recently over the radio. As the patient entered the operating room he said, "Doctor, I'm very, very nervous. This is my second operation." The young surgeon replied, "That's nothing, this is my first."

While this is the first time I've served in this particular capacity I do not feel nervous but I am concerned.

In accepting the presidency I do it very humbly. I appreciate the trust you have placed in me and the

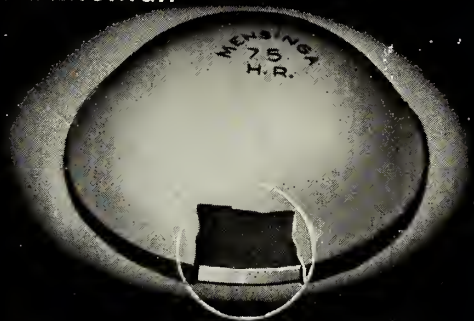
Diaphragms for EVERY Condition

H-R KOROMEX



CROSS-SECTION VIEW

H-R MENSINGA



CROSS-SECTION VIEW

H-R MATRISALUS



HOLLAND-RANTOS offers a most complete line of diaphragms. We invite inquiries concerning specific conditions.

• • •

The H-R Koromex diaphragm (coil spring type) is available in sizes from No. 50 to No. 105 mm., and is indicated for use in all normal anatomies.

The H-R Mensinga diaphragm (watch or flat spring) is available in sizes from No. 50 to No. 90 mm. including half sizes, and is indicated where there is a slight redundancy of the mucosa of the retro pubic space, or a slight relaxation of the anterior vaginal wall.

The H-R Matrisalus diaphragm is available in sizes—No. 1 to No. 6 corresponding to 65, 70, 75, 80, 85 and 90 mm. This special shaped diaphragm is indicated in cases of cystocele or prolapse where, owing to relaxed vaginal walls, the ordinary diaphragm cannot be retained in position.

**Send for copy of "Physician's Diaphragm Chart
and Fitting Technique"**

HOLLAND-RANTOS CO., Inc.

551 FIFTH AVE. - NEW YORK
308 W. WASHINGTON ST. - CHICAGO
520 WEST 7TH ST. - LOS ANGELES

honor you have given me. I resolve to discharge the duties of the office as promptly and efficiently as possible and shall make the greatest effort to fill the position with credit to our State Auxiliary.

I am aware that the year will bring some shadows with the sunshine and that I shall make mistakes but desire to be fair and helpful in the tasks set before me.

We want to be told what to do by our Advisory Committee for we do not originate policies but try to promote them.

The two phases of our work which we expect to stress this year are Organization and Public Relations.

The last report shows that thirty-nine states are organized and perhaps Massachusetts and Ohio are added by this time. Kansas is one of these organized states, but wouldn't it be splendid if Kansas were 100 per cent organized as is New Jersey, New Hampshire and Delaware? Let us aspire to that for the dreams of yesterday are fulfillments of today while hopes of today shall be the realization of tomorrow.

If each doctor's wife will help our organization chairman and the councilors we can, with the consent of each county society, be 100 per cent organized in Kansas.

To be a doctor's wife is a glorious adventure and privilege, but with privileges come responsibilities, and one of these responsibilities is to inform ourselves so we understand his problems and are prepared to make authentic statements to lay groups regarding legislation, health measures and community matters which effect him. Our self education may come to us largely through Auxiliary programs and through Hygeia.

After Dr. Nesselrode's discussion of questions sent to him by numerous organizations at a Public Relations meeting planned by an Auxiliary recently, one doctor's wife, from a near by town, said "I never understood the Wagner Bill until today. He made it so clear."

Let us arrange for gatherings, and speakers in groups already organized, so our doctors have an opportunity to "make clear" to the public many things about which they are now in the dark. That same day Dr. Nesselrode also spoke to an attentive group of several hundred high school and Junior college students on the subject, "Federal Agent or Family Doctor." As I listened I wished every person in Kansas might hear him or have an opportunity to know the dangers of State Medicine.

We know that the educational barrier is often greater than the economic one in creating misunderstanding in the fields of Health and Medical care so why not use Hygeia, the official voice of the American Medical Association to educate the laity?

If it were placed in every school in the state, and I hope it may be soon, it would still be our responsibility to contact the teacher and help her to appreciate its value so she would use it in the most beneficial way.

We have a very definite outline mapped out for us by the Auxiliary to the A. M. A. I should like to encourage each state chairman to avail herself of the ma-

terial prepared with great care and thought by the National Chairman for her assistance and urge each county chairman and officer to know the State Auxiliary official family and accept the services and help they offer through the year for Programs, Hygeia, Legislative, Organization, and Public Relations work.

May I suggest for the Auxiliary with small membership that you make all appointments for standing committees as outlined by the state, so you'll have names on the mailing list to receive information from State and National Auxiliary Chairmen, but don't be discouraged if you cannot carry out all suggestions made. It is physically impossible for a small number to do this in one year but if you determine to keep informed about the work, then choose the most important service for your community, and carry out one or two outstanding projects each year—eventually you will have covered the program and met the needs of your county.

May I also ask a favor of this year's officers and chairmen, both state and county. Will you please help your successor by your suggestions and by giving to them, this week, if possible, any helpful information or reports you have. Our work is often delayed, because it is weeks before a new officer gets her bearings. I'm sure you'll co-operate.

We feel the news letters have been very helpful this year so we expect to continue with them, but please ask your husband for the State Journal as we shall also reach you through its columns. Every Auxiliary will be benefited by one or more subscriptions to the National Bulletin which is the National news letter.

Our past presidents are all members of our State Board and this year I shall call them our "advisory committee" as I am not asking them to do active service—except in their home Auxiliaries. I believe they have earned a rest.

In closing, may I leave this thought with you. When Auxiliary work seems to pile up, so to speak, you will know—because it is important—it can be done.

Each of you have ridden over hilly roads and as you look down the highway, the hills look very steep, but as you come to the hill it seems to flatten out.

And so as we approach the tasks of the year, let us know that as we reach each individual problem the way will unfold and it can be solved.

I am looking to you for inspiration through the year, and know that as we work together worth while things can be done. Again, let me say, "thank you."

—Mrs. T. D. Blasdel.

FAREWELL MESSAGE OF THE PRESIDENT*

As we pause at this time to look back over the year's work, and to wish that we might have done thus and so, instead of this and that, we must be guided by our stumbling blocks and call them stepping stones. The year has been full of rich experiences and great treasures. We have become better acquainted with the topography of the

DEPENDABLE PRODUCTS



for PHYSICIANS

Prescribe or Dispense Zemmer

Pharmaceuticals, Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled. K.A. 5-40

*Write for General Price List
Chemists to the Medical
Profession*

THE ZEMMER COMPANY
Oakland Station, Pittsburgh, Pa.

SILVER PICRATE

Wyeth

HAS SHOWN A CONVINCING RECORD* OF
EFFECTIVENESS IN ACUTE ANTERIOR URETHRITIS

due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
Monilia albicans

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

Grandview Sanitarium

KANSAS CITY, KANSAS, (26th St. and Ridge Ave.)



A High Grade Sanitarium and Hospital of
super accommodations for the care of:

NERVOUS DISEASES
MILD PSYCHOSES
THE DRUG HABIT
AND INEBRIETY.

Situated on a 20-acre tract adjoining City Park
of 100 acres. Room with private bath can be
provided.

The City Park line of the Metropolitan Railway
passes within one block of the Sanitarium.
Management strictly ethical.

Telephone: Drexel 0019

SEND FOR BOOKLET

E. F. DeVILBISS, M.D., SUPT.

OFFICE, 1124 PROFESSIONAL BLDG., KANSAS CITY, MO.

State of Kansas, and can better understand the problems of the doctors and the doctors' wives in their tasks of promoting better medicine for this great state of ours.

We are glad to welcome our two new units, Mitchell and Reno Counties; and to say none have left us. There are those which need strength and inspiration. Shall we not this year take hold of these opportunities and gather others into the Woman's Auxiliary to The Kansas Medical Society. Never before in the history of our organization have our doctors needed us to spread the news about the good that the medical profession does do, and not what what "OTHERS SAY" they do not do. Keep yourselves informed and ready to answer such discussions which may come before you. This is our job. Let's do it.

Our hearts were saddened by the death of several of our doctors I hope we can help to ease and comfort of thoses left, and find a place in your midst where they can take an active part and thus carry forward the work their loved ones left.

The war news around us make us deeply sensitive of the fact our own may be needed, shall we not begin to build within ourselves fortifications of prayer, that we may not forget the mothers and widows of those already gone in foreign lands.

To Dr. West and his committee, who have been ever ready to advise and help us with our decisions, I would like to give grateful appreciation. To all of you who have had any part in this marvelous convention, to Dr. Nesselrode, not only for this helpful greeting but his loyalty through the year, and Dr. Loveland for his message, to you we shall look for guidance this coming year; and to Mrs. Reifsnieder and her various and sundry committees for their untiring efforts, to my loyal staff of officers, committee chairmen, councilors, and county presidents, may I once again say with all my heart, I thank you.

Now Mrs. Blasdel, it becomes my privilege to pass on to you this gavel and in so doing may I wish for you

a year full of such activity as will bring gratitude to your heart and inspire more doctors' wives to join hands in a oneness of purpose.

Mrs. LaVerne B. Spake,
Retiring President.

* Given at the luncheon meeting, May 15, 1940.

AUXILIARY COLUMN

The Saline County Auxiliary met at dinner the evening of March 7 at the Casa Bonita Cafe in Salina to welcome Mrs. La Verne B. Spake, President of the State Auxiliary. Mrs. C. Omer West, State Recording Secre-

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago

Phone Randolph 8855

JOHNSON HOSPITAL CHANUTE, KANSAS

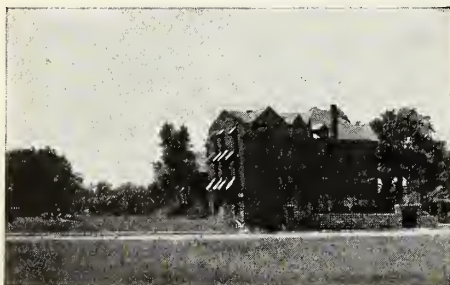
Complete Clinical
Laboratory
Radium
X-Ray

FOR SALE—Office equipment of the late R. D. Fraker, M.D., of Garnett, Kansas. Description and prices on request. Mrs. Lola E. Fraker, Garnett, Kansas.

FOR SALE: A number of X-Ray accessories and parts; some surgical instruments. Send for list. P. O. Box No. 558, Kinsley, Kansas.

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—VICTOR 4850

Registered by the Council on Medical Education and Hospitals of the A.M.A.

... many of the patients changed from one brand of cigarettes to another from time to time because of the effect on their throats".

*Laryngoscope, Feb. 1935
Vol. XLV, No. 2, 149-154*

ON GUIDING PATIENTS IN THEIR CIGARETTE SMOKING

It is certainly worth knowing that tests reported in the same paper showed every case of irritation of the nose and throat due to smoking *cleared completely or definitely improved* when smokers changed to Philip Morris.

Write for reprints of published studies on the comparative irritant properties of cigarettes. Address Philip Morris & Co., Ltd., Inc., 119 Fifth Avenue, New York.

tary and Mrs. W. G. Emery, State Press and Publicity Chairman were also guests. Mrs. Spake, Mrs. West and Mrs. Emery addressed the meeting. Following the dinner and addresses the members and guests were invited to the home of Mrs. Leo Shaefer where they were informally entertained.

Twenty members and guests of the Labette County Auxiliary attended a 1:00 o'clock luncheon March 12 complimentary to Mrs. La Verne B. Spake, President of the State Auxiliary. Low bowls of spring flowers decorated the tables and sweet pea corsages were at each place.

Following the luncheon was a business meeting, at which Mrs. Spake and other state officers spoke. Plans were completed for an address by Dr. C. C. Nesselrode, on April 3 in the parlors of the Central Avenue Christian Church. Dr. Nesselrode comes at the request of the Labette County Auxiliary to speak on health subjects, the talk to be made as answers to questions previously asked.

The Wyandotte County Auxiliary held a luncheon meeting March 5 at the home of Mrs. Harold V. Holter. Mrs. Buford R. Barnett gave a group of selected readings. Mrs. W. F. Asendorf, accompanied by Miss Helen Hummel, rendered a group of songs. Officers for the coming year were elected.

The Central Kansas Auxiliary met March 8 at the Lamer Hotel in Hays. Luncheon was served in the Oil Room in honor of Mrs. La Verne B. Spake, State Presi-

A genuine desire to serve you
well makes it pleasant and con-
venient to patronize—

QUINTON - DUFFENS OPTICAL COMPANY

Your Local Independent Wholesaler

TOPEKA

HUTCHINSON

SALINA

200 YARDS OF MATHEMATICS

TO SOLVE A NEW OPHTHALMIC PROBLEM

When a group of Dartmouth scientists found that Aniseikonia was subject to correction, they selected American Optical Company as best suited to handle the intricate prescriptions. The original chart plotting the basic curves of Iseikonic lenses was more than 200 yards long. Today, American Optical Company operates the only Iseikonic Lens Laboratory in the world. Those who buy American Optical instruments by American, do so with confidence that each is backed by the reliability of American Optical and its Scientific Instrument Division, Spencer Lens Company.



By

AMERICAN OPTICAL COMPANY

You are Cordially Invited

to visit a display of Luzier's Fine Cosmetics and Perfumes in Booth 344 at the National Convention of The American Medical Association in New York City, June 10-14. Trained attendants will be on hand to explain Luzier's Service in detail and to answer your questions.

LUZIER'S FINE COSMETICS AND PERFUMES ARE DISTRIBUTED IN KANSAS BY:

C. B. BURBRIDGE, *Divisional Distributor*
Lincoln, Nebraska

DISTRICT DISTRIBUTORS

EDWIN S. KIMMEL
P. O. Box 269
Concordia, Kansas

SUB-DISTRIBUTORS

LAURA CUDDY
614 Freemont Street
Manhattan, Kansas

MARY I. GREENE
301 West Fifth Street
Junction City, Kansas

MYRA KIMMEL
P. O. Box 269
Concordia, Kansas

ELSIE HARING
10 East Tenth Street
Hutchinson, Kansas

MABLE SEARS
909 E. Elm Street
Salina, Kansas

dent. In addition to Mrs. Spake the following state officers were introduced: Mrs. C. Omer West, Recording Secretary; Mrs. Foster Dennis, Treasurer; Mrs. J. B. Carter, Archives Chairman; Mrs. F. E. Coffey, Organization Chairman; Mrs. W. G. Emery, Press-Publicity Chairman; Mrs. E. J. Nodurfth, Exhibits Chairman; Mrs. C. D. Blake, Councilor, tenth district. Each spoke of their work.

Mrs. Spake, in an address, reported the National Board meeting in St. Louis and the A.M.A. broadcast over WREN, on Thursdays at 3:30 p.m., she also presented plans for the Kansas Auxiliary and besought the help of individual members on various civic club committees and the Kansas Women's Field Army.

The Central Kansas Auxiliary through Mrs. W. Y. Herrick, of Wakeeney, presented Mrs. Spake with a memento gift. Brief cases for the respective use of the president, secretary, and treasurer of the Central Kansas Auxiliary were given those officers. Mrs. J. B. Carter, Mrs. A. E. O'Donnell, Mrs. F. E. Coffey, as Past Presidents, will serve as Delegates to the Annual State Convention, at Wichita, with Mrs. R. S. Brady, Mrs. W. Y. Herrick, Mrs. F. E. Richmond, Mrs. C. D. Blake, and Mrs. H. R. Bryan, who were elected Alternates.

After adjournment the ladies joined the Central Kansas Medical Society at a 6:30 dinner at the Lamer Hotel.

The Sedgwick County Auxiliary gave a luncheon and other entertainment to visiting officers of the State Auxiliary on March 11 at the Innes Tea Room, in Wichita.

The visiting officers were Mrs. La Verne B. Spake, State President; Mrs. T. D. Blasdel, President Elect; Mrs. H. Regier, Corresponding Secretary; Mrs. C. Omer West, Recording Secretary; Mrs. Foster Dennis, Treasurer. The members of the board of Sedgwick Auxiliary entertained the official guests with a dinner the previous Sunday evening in the Colonial Room of the Lassen Hotel. At the luncheon Mr. Ray Wall arranged an elaborate musical program, while at the dinner Dr. and Mrs. N. J. Bierman showed motion pictures of South America and other travel pictures.

It won't be long now before the Woman's Auxiliary to the American Medical Association will be convening at the Hotel Pennsylvania, in New York City, for their eighteenth annual convention to be held June 10 to 14, 1940. Is your reservation in? We are sure you will want to stay at the headquarters, Hotel Pennsylvania. In order to get a reservation, mail your request today to Dr. Peter Irving of the Housing Bureau, room 1036, 233 Broadway, New York City.

AUXILIARY MEETING IN WICHITA

The Woman's Auxiliary to The Kansas Medical Society met in Wichita, May 14 and 15.

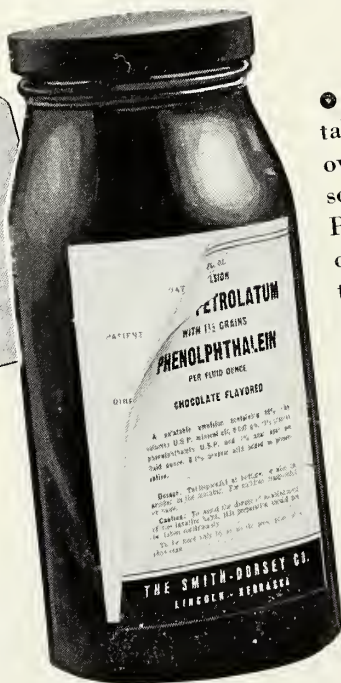
The Sedgwick County Auxiliary, as always, provided an unusual program of entertainment. The visiting ladies

New!

Announcing
A
CHOCOLATE FLAVORED
EMULSION OF
LIQUID
PETROLATUM

Council Accepted

● Emulsion of Liquid Petrolatum Chocolate Flavored is Council accepted. A PRESCRIPTION PRODUCT DESIGNED ESPECIALLY FOR THE PHYSICIAN (note prescription label on the bottle). And it may be obtained without phenolphthalein—or with 5 grains or 1½ grains to the fluid ounce.



● For patients required to take a mineral oil emulsion over any length of time—prescribe this Emulsion of Liquid Petrolatum Chocolate Flavored. There is no oily after-taste! And it has the inviting appearance and flavor of a delicious chocolate dessert. Your patients do not rebel against it! This product contains 60% Liquid Petrolatum U.S.P. and 1% Agar Agar.

Mail Coupon for Sample

THE SMITH-DORSEY CO.
Lincoln, Nebraska.

Gentlemen: Please send me a sample of Emulsion Liquid Petrolatum Chocolate Flavored.

- ☐ With Phenolphthalein
☐ Plain

Dr. _____

Address _____

City _____ State _____

The Journal Of THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

JUNE, 1940

Number 6

THE TREATMENT OF ACUTE AND CHRONIC BRUCELLOSIS*

Fred E. Angle, M.D.

and

William H. Algie, M.D.

Kansas City, Kansas

In 1924, Keefer¹ reported the first case of undulant fever in man to be caused by the brucella abortus. 1939 marked the fifteenth year since this disease was called to the attention of the American clinician and we believe that there has been, perhaps, no other new disease entity which has produced so much literature as has undulant fever. We now have to consider this disease in the differential diagnosis not only of febrile conditions but also many afebrile diseases. One can definitely state that brucellosis can be classified with syphilis, tuberculosis and malignant disease in that it is able to simulate any disease process.

We could divide the past fifteen years into three periods: first, the years from 1924 to 1932, when attention was directed primarily to the recognition of the acute variety of the disease; and second from 1932 to 1937, the period when attention was directed to the chronic form of the disease, in which there occurred in the average patient a low grade, chronic recurrent elevation of temperature. Since 1937, our attention has been directed more and more to that individual with many chronic complaints, particularly those of a neurological character, who may not have fever but who does have clinical and serologic evidence of brucella infection. Your attention is again called to the fact that epidemiological and serological studies of large groups, both children and adults, have been made in the United States. As a result of these studies, one can say that in approximately five per cent of the adult population of the United States, the blood serum will contain agglutinins in either low or high titration. In the study of 7,122 children in Kansas City, Kansas, employing brucellergin as a skin testing

medium, we found that nine per cent gave positive reactions.^{2,3} It would be preposterous to state that all of these individuals are the victims of either acute or chronic brucellosis. Evidence of infection does not mean disease. This point cannot be over emphasized. The diagnosis of acute or chronic brucellosis, as does the diagnosis of tuberculosis, rests upon clinical symptoms and signs plus certain immunological or bacteriological evidence.

We feel that the above remarks are necessary before entering into a discussion of treatment. We wish to add that because of the large number of positive reactors in our population there have been frequent errors in diagnosis. Thus, we have seen patients with malignant disease accompanied by a low grade fever who have also a high agglutination titre for undulant fever. We have also observed this to be true in cases of tuberculosis, typhoid fever, streptococcic septicemia, etc. Given a patient with a low agglutination titre in the blood as an immune reaction, have this patient develop some additional infection and it will be observed that the blood agglutinins rise in titre. They may rise to the point where, if one were to accept the statement of the Public Health Service, that an agglutination titre of 1-80 is diagnostic, a serious error would be made.

The acute form of undulant fever is a self limiting disease and before one attempts to evaluate any method of treatment, he should bear this fact in mind. The average course of the acute form, as given by various authorities both in this country and in Europe, is from six to twelve weeks, and many times treatment will produce an apparent cure in a patient who is undoubtedly recovering because of his own resistance. We feel that the great majority of cases of acute undulant fever have gone unrecognized and untreated to complete recovery.

The evaluation of the end results of any method of treatment for undulant fever is most difficult. This applies particularly to the chronic form of the disease. Concerning recommended treatment, the following is our opinion of some of the methods which have been tried and found of value and others which we have discontinued. A few direct

*Read at the Seventeenth Annual Fall Clinical Conference of The Kansas City Southwest Clinical Society, October 5, 1939.

statements may be made where large control studies are reviewed: 1. The various dye substances, including acriflavine, gentian violet, mercurochrome, metaphen, etc., have proved to be of little or no value. 2. Neo-arsphenamin has not proved to be of value. 3. Fuadin, the English advocated method has not stood the test of time. 4. Foshay's serum, which is not available commercially, has been tried rather extensively by him. He is of the opinion that it is a specific therapy up to approximately eight months.⁴ After this, for some reason which he is unable to explain, the serum is of no value. We secured beneficial results in one case of the acute disease in which there had been failure with vaccine therapy. We noted, however, that the improvement followed a severe serum reaction which was associated with marked elevation in temperature. 5. Nucleoprotein extract of the brucella, prepared by Huddleston and called "Brucin" or "Brucellergin," has been used and reported favorably. Here again the preparation is not available commercially and thus, has not had the trial of the rank and file of profession.

In reviewing the literature of the past five years, one is impressed with two methods which apparently are outstanding. These we will discuss briefly. Since the introduction of sulfanilamide in its various forms, this drug has been advocated in the treatment of numerous septic states and, of course, has been tried in the treatment of brucellosis. The early reports of sulfanilamide therapy, usually based on the treatment of from one to ten cases, were most encouraging, and it was thought by many that this drug would be a specific. However, there have appeared in the past few months some very striking reports in relation to its failure. De Bono's⁵ report is particularly interesting because this physician is reporting from the fountainhead of the disease, the Island of Malta, and because he is one who has had a tremendous experience with this condition. Twenty-five cases were treated with prontosil in adequate dosage at the central hospital, Malta, between August 15th and September 22nd, 1938. In nineteen cases there was no appreciable effect on the temperature or on the course of the disease. In the septicemic cases, the effects appeared to be definitely harmful and two of these patients died. Analysis of the six apparently successful cases showed that two relapsed and that one of these patients died; one case was very mild; and in another only a very small dose had been given. The other two recovered in the eighth and seventeenth weeks respectively. There was no appreciable effect on the agglutination titre or on the white corpuscles. He had the impression, how-

ever, that prontosil interfered in some way with the development of natural immunity. In fact, of the twenty-five cases treated, twelve still ran a temperature, while of a similar series of twenty treated symptomatically at the same time, all but two recovered.

In the American Literature a recent report by Bynum⁶ should be mentioned. His conclusions were made from six cases, two acute, one subacute and three chronic undulant fever. These were treated by maximum therapeutic doses of sulfanilamide as recommended. He was unable to duplicate the satisfactory results heretofore reported by the use of this therapeutic agent.

Arguments used for the specific action of sulfanilamide in the treatment of undulant fever are based largely on the work of Welch, et al⁷ in which by animal experiments they were able to show that there was a marked increase in the opsonocytaphagic activity for the brucella organisms. They believe that in this fashion the resistance to the infection was stimulated by this drug.

We next wish to call attention to the other outstanding method of treatment which is the so-called "therapeutic shock" method by the employment of specific vaccine,⁸ typhoid vaccine⁹ or artificial hyperpyrexia.¹⁰ Specific vaccine therapy has been by far the most tried method of therapy, both in this country and in Europe. In reviewing the literature, one will note that several methods of administration of the specific vaccine have been employed—intracutaneous, subcutaneous and intramuscular routes, and particularly in European circles,¹¹ intravenous administration in small doses. This method of treatment has more advocates and the literature contains more favorable reports than with any other method of treatment so far proposed.

The American clinician has been reluctant to administer specific vaccine intravenously because of severe reactions and we reported in 1935,⁸ that because of these reactions which we had observed we believed that this was a dangerous method of therapy. We have, however, found in selected cases of brucellosis which failed to respond to other methods have responded to small doses of from ten to twenty-five million of the Brucella organisms given intravenously. We have also observed apparent cures in chronic cases in which brucella vaccine had been used previously by the other methods of injection. We do believe, however, that both in specific vaccine and in non-specific vaccine therapy and artificial hyperpyrexia as advocated by Prickman,¹⁰ patients should be carefully selected as to age, state of nutrition and other

complicating degenerative diseases before these methods are employed.

The method of action of either specific or non-specific vaccine has not been explained on a sound immunological basis. Many theories have been advanced, but in those cases which have yielded good clinical results we have been unable to show any specific immunological changes in the blood stream or cytophagic activity of the phagocytes. In a small series of cases, we have been unable to duplicate the results of Prickman from the use of artificial fever in the chronic phase of the disease. We have also had failures with typhoid vaccine intravenously in cases in which a distinctly beneficial result was obtained from the use of a mixed vaccine of the abortus and suis strains of the brucella. In 1935,⁸ we reported a series of 100 cases which had been followed during the course of seven years. The conclusions reached in that study would, at this moment be modified in that there have been some undoubted recurrences of undulant fever in cases which are apparently well for a period of more than five years. We are, however, of the opinion that they were definitely benefited by specific vaccine therapy.

We believe that, if specific vaccine is used, it should be administered intramuscularly or in selected cases, intravenously in small doses. Not more than three to five injections should be made and if the temperature reaches 103 degrees to 104 degrees with a single injection, then treatment should be stopped. Adequate time should be allowed for interpretation of the result because in those individuals who are sensitive to this antigen, fever can be produced at any time even after complete symptomatic recovery.

Of recent years we have paid more attention to the existence of complicating foci of infection in the individual with chronic recurrent undulant fever. We believe that those cases which do not recover are harboring some focus of infection some place within the body. We make every attempt in the chronic case to eradicate, if possible, such foci as infected teeth, tonsils, sinuses, gallbladder, prostate, etc., before any method of therapy is instituted.

Much attention has been directed in the past few years to the study of the opsonocytophagic activity of the blood. Huddleston¹² has given the criteria whereby one may differentiate between a state of possible infection and an immune reaction. Our experience with this procedure has not been so easy of interpretation. In many instances we were unable to correlate the clinical state with the cytophagic activity, and obtained an immune reaction in persons with active disease. While we believe that this procedure is of value, we recognize its tech-

nical difficulties and question its clinical application. However, we are continuing to use it as an adjunct laboratory procedure in the management of brucellosis.

A complete blood count is of aid in our opinion, in both diagnosis and prognosis in the management of brucella infection. We have observed in the past twelve years that there is almost always present a definite leukopenia, definite lymphocytosis in the active disease, either acute or chronic. When the blood count is elevated and there is an increase in the polymorphonuclear leukocytes we always question the diagnosis.

In addition to an attempt at specific therapy all of our patients receive a high caloric diet with feedings between meals. This is very important in the handling of patients with prolonged fever. As the patient shows signs of improvement a tonic mixture particularly rich in vitamins is prescribed. A large number of such proprietary mixtures are on the market and we have no particular preference. The patient showing a blood picture of secondary anemia is given an adequate amount of iron, usually in the form of Feosol, four tablets daily.

The question often presents itself in a case in which there is apparent recovery "Is the patient well?" or "What are the criteria by which one can establish that the patient is cured?" In answer to these questions it may be stated that as the patient recovers from brucellosis:

1. There is a definite disappearance of his subjective symptoms.
2. There is an increase in weight.
3. There is a gradual disappearance of fever.
4. The agglutination titre of the blood diminishes.
5. The blood picture returns to normal.
6. The remaining neurologic symptoms subside.

CONCLUSIONS

1. There is at the present time no specific method of therapy for the treatment of either acute or chronic brucellosis.

2. A review of the literature would indicate that one of the "shock" methods of therapy perhaps represents the best method now available. The evidence in hand would point to specific vaccine as the preferred method in this group.

3. Before treatment a case of chronic brucellosis, a great care should be used in the eradication of any possible foci of infection.

4. The more recent literature will show that sulfanilamide is not a specific for brucella infection.

5. A large number of persons in the United States present serologic evidence of infection as a part of an immune reaction, great care should be taken

before a diagnosis of acute or chronic brucellosis is made.

6. A recurrence may come after years of apparent cure; therefore, care should be used before interpreting any method of therapy.

BIBLIOGRAPHY

1. Keefer, C. S.: Report of a Case of Malta Fever, Originating in Baltimore Mr., Bull. Johns Hopkins Hosp. 35:6 (Jan.) 1924.
2. Angle, F. E., Algie, W. H., Baumgartner, L., and Lunsford, W. F.: Skin Testing for Brucellosis (Undulant Fever) in School Children, Ann. Int. Med. 12:495-502 (Oct.) 1938.
3. Angle, F. E., and Algie, W. H.: Chronic Brucellosis (Undulant Fever); An Analytical Study of the Positive Reactors Among School Children, Ann. Int. Med. 12:1189-1193 (Feb.) 1939.
4. Foshay, Leo: Personal Communication.
5. De Bono, J. E.: Treatment of Brucella Melitensis Infection with Prontosil, Brit. M. J. 2:326-327 (Feb. 18) 1939.
6. Bynum, W. Turner: Recurrences of Undulant Fever (Brucellosis) Following the Administration of Sulfanilamide, J.A.M.A. 112:835-836 (Mar. 4) 1939.
7. Welch, Henry, et. al: The Use of Sulfanilamide in the Diagnosis and Treatment of Brucellosis, J. A. M. A. 111:226-231 (July 16) 1938.
8. Angle, F. E.: Treatment of Acute and Chronic Brucellosis (Undulant Fever), J. A. M. A. 105:939-941 (Sept. 21) 1935.
9. Ervin, C. E., Hunt, H. F., Niles, J. S. Jr.: Treatment of Undulant Fever by the Intravenous Injection of Killed Typhoid-Paratyphoid "A" and Paratyphoid "B" Bacilli, Am. J. M. Sc. 192:234-241 1936.
10. Prickman, L. E., and Popp, W. C.: Treatment of Brucellosis by Hyperpyrexia Induced by the Simpson-Kettering Hypertherm, Proc. Staff Meet. Mayo Clin. 11:506-510 (Aug. 5) 1936.
11. Tarpi, A. A.: Symptomatology and Therapy of Brucellosis, Vrachebnoe Delo, Kharkov 21:371-450 (No. 6) 1939.
12. Huddleston, J. F.: Brucella Infections in Animals and Man, New York, Commonwealth Fund, Oxford University Press, 1934.

TREATMENT OF THE COMMONER INJURIES OF THE HAND

Laurence S. Nelson, M. D.

Salina, Kansas

This subject is one which at first glance seems unimportant and trivial, but which on inspection one may realize is, at times, fraught with intense importance and indeed some measure of naivete. This is because there is no deformity more constantly obvious and none which the average jury views with more sympathy than that to the human hand. In importance to man and his general upward evolution, it is probably true that the hands rank third, superseded only by the special senses of seeing and hearing. Certainly most creative results of our finest artistic or scientific minds needed the work of human hands for completion as does also the most monotonous task of the most menial labor. They are the principle executors of the acts of this thinking organism known as homo sapiens.

Since it has been found both wise and necessary to review anatomy at frequent intervals, and since we have also been impressed again and again by the complexity of the anatomy of the human hand and the double need, therefore, for these anatomical reviews, I take this opportunity to present a short

review of that part of the anatomy of the hand which is most concerned in the treatment of fractures thereof. I wish, however, to reverse the usual order and begin at the finger tips.

There are fourteen phalanges, three for each of the fingers and two for the thumb. The terminal or distal phalanx is a small tapering bone with a thimble shaped knob on its distal end, one to two centimeters in length which articulates with its respective midphalanx at its proximal end, that of the thumb having the greatest hyperextension, and usually they taper from the mid-finger which has the largest and longest, both ways to the first and fifth in thickness and length with no curvature whatever. The midphalanges, four in number, have a gentle volar concavity and articulate at either end and here again, the length is slightly reduced in each, with the midfinger as the longest. This picture is repeated almost exactly for the proximal phalanges which are slightly heavier bones.

The bony structure, or framework of the palm, is formed by the metacarpal bones, the first, which is that of the thumb, being the shortest and the largest in diameter, with a volar concavity which starts the longitudinal arc of the human hand. The second is the longest of the five and is not quite so heavy, and also has a concavity toward the palm, as have all of these bones, making a longitudinal arc of the entire hand. As they go, then, the third, fourth and fifth become not only shorter, but also somewhat smaller in diameter; all of them with the same gentle curvature. There is some transverse arching also, which while definitely present, is less important from the point of view of the treatment of fractures.

The articulations of these bones are also of sufficient importance to demand mention because at their proximal ends they not only articulate with the carpal bones of the wrist, but also with each other. At their distal ends, of course, their articulation is with the proximal end of the proximal phalanx in each instance except with the thumb, which of course has but two phalanges.

The muscles and tendons of the hand are many and all will not be included here. The important ones which we discuss will be considered from the finger tips proximal-ward or from insertion to origin since the care of the hand when injured is our prime motive. Two of the flexor group are certainly worthy subjects because of their function and because they are often injured. At the base of the terminal phalanx of each of the four digits is attached the respective tendon of the flexor digitorum profundus, which run up the fingers through the palm and converge above the wrist where the muscle

fibers begin and have their upper attachment at the humeral end of the radius. These tendons are somewhat joined together in the palm by the lumbricale muscles. The action of this arrangement is, of course, to flex the distal and then the midphalanx of each finger. The thumb is flexed and adducted by the pollicis group and thus captioned.

The flexor digitorum sublimus has a divided attachment on either side of the proximal end of each midphalanx and under and between these attachments run the profundus tendons above described. These four main tendons then converge above the wrist into a goodly muscle bundle which originated in the volar upper third of the forearm with also slight humeral origin. Its chief function is to flex the proximal phalanx and add strength to the "grip" of the hand. These are the most important of the flexors which have definitely to do with fractures of the metacarpals and phalanges. The extensor group on the back of the hand consists mainly in the three extensor pollicis muscles which abduct the thumb and extend it, then the extensor digitorum communis and the external indices proprius and the extensor carpi radialis and ulnaris. (These have digital tendinous attachments and run proximalward from there producing the extensor action important to a properly functioning hand.)

The nerve supply of this area of the body is always of interest and briefly, without detail, comes originally from the fifth, sixth, seventh and eighth cervical and first thoracic, through the brachial plexus, of course, and dividing into the median, the ulnar and the radial nerves. The median derives its supply from the fifth, sixth, seventh and eighth cervicals, the ulnar from the eighth cervical and the first thoracic, the radial from the sixth, seventh and eighth cervical nerves. The distribution in the hand is well known and complex and may have much to do, when injured, with deformities of the hand.

These injuries so often produce not only a bony derangement, but also injury to both nerves and tendons, which are serious in the final implications unless understood somewhat at the time of the injury. It can be readily understood that the fracture of the bone itself is less important so far as the ultimate recovery of the member is concerned than the injury to the nerves, muscles and tendons. While the bony injury is important, it can be set and healing ensues, but that alone does not complete the rehabilitation if other injuries accompany the bony one, or loss of bony structure has occurred.

The incidence of these injuries is rather low. We do not see them in this area very frequently. In industrial centers they are more frequent and the severest are produced by some crushing injury, when

the hand is caught in a piece of machinery or underneath a heavy object. Sometimes they occur as a result of a blow being struck with the fist.

The immediate diagnosis of the extent of the injury we believe to be of sufficient importance that it warrants short discussion. First, the bony destruction can best be discovered by x-ray, of course, and even though one is rather certain of the extent of the injury, it is well to corroborate the diagnosis with an x-ray. Secondly, and more important, the ability of the individual to move the fingers following the injury is of extreme importance with reference to the amount of tendon and nerve injury which has occurred. Even though a break has occurred, the finger should be moved and areas of anesthesia below the injury which would indicate injury to the nerves should be noted because the prognosis in any case would depend a great deal upon all of the factors which are involved in such injuries. Nerve suturing is now an important surgical entity for the repair of wounds which involve them, but that is a subject apart from the present discourse.

Since the monumental work of the late Dr. Allen B. Kanavel in matters of the infections of the hand, and since, in treating fractures of the metacarpals and phalanges one so frequently finds a flesh wound, penetrating from the bony injury to the outside, his principles of wound care which we believe are important enough for consideration, can be briefly stated. Our own experience would bear out especially three salient points. The first is that the time which elapses from the infliction of the wound until it is cleansed is highly important with reference to subsequent infection, and that when more than four hours have elapsed it seems almost inevitable that more or less infection will take place. The second and most important is the technique of cleansing. I wash with liquid soap and sterile water above and below the emergency bandage, even though that may be a dirty handkerchief. This bandage is then removed and washing carried to the wound edges and the scrubbing continued for ten minutes. Each wound is then irrigated thoroughly and carefully for five minutes with a stream of sterile normal saline. A common 6" x 12" cake pan, covered with hail wire which can be sterilized and on which the hand is laid is especially convenient for the latter purpose, and can be used for cleansing wounds of any extremity.

It has become my habit to do the cleansing, both with soap and water and with the normal saline, myself. The constant changing of personnel in the average operating room or emergency room makes it so difficult to keep a carefully trained technician of any type to do this particular thing satisfactorily,

coupled with the importance of this part of the treatment, that I take the time to do it myself, and I believe in many instances I have reaped a harvest of ease of care following the severe injuries to the hand, as well as to the injuries elsewhere which need the same kind of treatment.

The third salient point which I wish to mention at this time is that of complete immobility following the repair. Immobilization of both bony and soft tissue of the hand following injury was well taught to us, but the same principles for infections of these members were left out and I take this opportunity to concur most heartily in the teaching of the late Dr. Kanavel and Dr. Sumner Koch in the emphasis on the efficacy of similar measures in dealing with infected areas anywhere, most especially the hands and fingers.

While doing the cleansing we evaluate the situation and decide between local and general anesthesia, preferring the former where possible. We have used brachial block, wrist block and local infiltration. We firmly insist on satisfactory anesthesia, preferring general to being hampered in our effort at repair. In either case and especially if the latter is to be used, we evaluate first the tendon and nerve injuries as far as possible, testing these elements by digital motion and by areas of local anesthesia. Hemostasis is aided during repair by adrenalin if local is used or by the pneumatic tube above the elbow if general anesthetic is employed.

For purposes of clarity, there probably should be a classification of these injuries, and so we hereby divide them into three groups: (1) the group of dislocations which one sees and which we believe demands a special type of treatment; (2) the simple fractures in which there is no joint involvement and no injury of consequence to the soft tissue; (3) compound fractures, either with or without joint destruction and injury to the soft tissue, and of course, it is this latter group which demands the most careful attention and we will therefore consider the treatment of the two former groups more briefly.

The first group of dislocations is easily handled usually by reduction and immobilization of the structures with adequate time for the soft tissue to repair itself. In the second group of simple fractures of the metacarpals and phalanges, we have used with entire satisfaction local anesthesia and closed reduction and traction dressing in a banjo splint, of the type which is used for a single digit or the larger type which we will describe for putting traction on the entire hand. If the fracture is a simple one of the metacarpals or proximal phalanx, there is no question but that the banjo splint

will hold the framework satisfactorily. If it is of the middle phalanx, the roller bandage type of dressing will do very nicely unless it is a compound injury.

The words of Dr. Magnuson are herewith recalled in substance at least, when he devoted an entire paper to the subject, "Brain versus Gadgets." Most splint manufacturers have complicated banjo splint arrangements which are and have been used. Most of us have seen rooms full of discarded, if not forgotten, splints to which a recruit is added at frequent intervals because something superior, which usually means simpler, has been developed. As we advance, too, in our "modus operandi," the old and expensive "gadget" becomes obsolete. Therefore, wherever and whenever a simple home made device will perform the needed service as well or better, it is our humble opinion that it should be used. The mental energy required to make some gadgets work is far in excess of that required if applied to the principles involved in the fracture at hand. This is true of all fractures and most particularly those of the hand.

Preferring as we do the traction dressing, a brief description of two types is apropos. For a single digit, a U-shaped piece of bailing wire extending from the mid-palm or wrist to two inches beyond the injured digit, bent also with an offset just distal to the web of the finger in order that it will run out directly between the fingers, is embodied in a plaster of Paris cast including the wrist and palm, in partial extension. Then either with tape and rubber bands, especially if the proximal phalanx is the one involved, or by using a plain Glover's needle through the distal phalanx and rubber band, and with the wire bent so as to flex gently the metacarpo-phalangeal joint, rubber band extension is applied.

The second type is the banjo splint which we construct ourselves. The materials necessary are a pair of pliers, a wire coat hanger, stockinette plaster of Paris bandage, adhesive tape and rubber bands. Paper casts now more frequently supplant plaster. We do not cut the wire because it is too tough for an ordinary pair of pliers, so we unwind it where the two ends are joined, then bend it in the desired shape and embody the crooked ends in a cast including forearm and wrist. Then the digits are fastened to the ring with adhesive tape and rubber bands, or Glover's needle through the distal phalanx, so that the traction can be adjusted as to direction and extent. If the needle is used, it is run through midway between the base of the nail and joint crease of the distal joint. Since the most natural position of the band is slight extension at the

carpo metacarpal joint with partial flexion of the metacarpophalangeal joint, we place the member in this position. Therefore if this type of appliance is used for multiple digital fracture, we extend the cast into the palm with a tongue arrangement either of metal (aluminum) or cast, then with this padded tongue supporting the palm to extend the hand, the banjo is bent so as to flex the metacarpophalangeal joint for the position of optimum comfort. Where open reduction and frequent dressings are needed in severe complicated wounds, this method of fixation is most convenient.

Immobility for such injuries should end as soon as possible and passive motion begun, three weeks being the period we carry in mind as the maximum. While such things cannot be practiced by the calendar, we know that the earliest safe time to begin motion is the correct method for early return to function. Extension may often be eliminated before immobilization and we have employed a secondary cast, one made of either one inch or two-inch craft paper with complete satisfaction. The technique of application is simple and immobility can be maintained without the weight of a plaster cast. Stockinette is reapplied after cleansing the skin and either through a dispenser or running over improvised roller or dipping in water, strips of ordinary 9 lb. craft paper twelve to eighteen inches long are applied around as well as longitudinally until quite a thick cast surrounds the member; when dry this cast is very rigid and light. Shellac may be applied as a refinement but does no real good. Castex is superior in appearance, but is yet expensive and no improvement as far as immobility is concerned.

We use both one-inch and two-inch paper and are finding that we can use it many times instead of plaster even for the original banjo splint. We are sure it can always be used for digital fractures and we are now trying it in case of simple metacarpal fracture. The advantages would thus far seem to be: (1) ease of application (the most inexperienced person can tear off strips of paper and wet them); (2) the cast will be dry enough within an hour to allow traction of moderate extent; (3) it is always more durable than one expects and has ample rigidity; (4) the lightness recommends it to the patient; (5) the ease of removal is certainly time-saving; (6) if the first dressing is not satisfactory and one's better judgment dictates removal and re-application, one does not shudder at the task. The same cast can easily be re-applied.

The most severe injuries where tissue is lost, careful and conservative debridement with loose closure where possible is proper. If impossible, we leave

all of the tissue possible and allow the wound to granulate preparatory to grafting.

Because of the need of evaluating the permanent disability we have adopted and feel a debt of gratitude to the Harvard University Orthopedic group. The system is not too complex and explains more fully the situation for the insurance companies. Numbers one to four indicate the percentage of perfection of the end result and three letters indicate elements evaluated. A, stands for anatomic; F, equals function; E, represents economic; thus A2, F3, E4 equals fifty per cent anatomical, seventy-five per cent functional, 100 per cent economical.

The four is chosen because of four classes in each three divisions.

Anatomic: (a) length, (b) alignment, (c) apposition, (d) angulation.

Functional: (a) subjective, (b) objective (muscle strength, staying power), (c) joint movement above fracture, (d) joint movement below fracture (compare with opposite side).

Economic: (a) same work as before injury, (b) same pay as before, (c) same hours of work, (d) same volume of work.

A4, F4, E4 would be considered a perfect result.

CONCLUSION

1. Short anatomical review.
2. Classification, simple, complex, and compound injuries.
3. Home-made banjo splints.
4. Traction, tape and skeletal.
5. New secondary casts made of paper.
6. The Harvard rating of end results.

According to the League of Nations Statistical Year Book, 1938-1939 Edition, birth rates over the world show a decline and the growth of population is due to decrease in mortality. According to present trends, it is disclosed that Wales and England face an approximately twenty-two per cent decline in population in the next thirty years. Because many birth and death rates in many sections were not kept before the war, it is more difficult to compute figures of the United States. Yet the tables show that fertility rates here are no longer sufficient to maintain the population at its present figure, and the population will decline about five per cent in the next thirty years unless the difference is offset by immigration or some compensatory factor. Germany has not succeeded in reaching pre-war levels, and Italy's efforts to increase her population are even less successful.

New Zealand has the lowest—twenty-three per 1000—infant mortality rate and Chile the highest—240 per 1000. In the Year Book tables of "Expectancy of Life," it is shown that in New Zealand people live, on the average, to age sixty-five; in the United States to age sixty-two; in United Kingdom to age sixty. In Japan the average is forty-five; for Egypt, thirty; and for India, 27.5. In every country it was shown that women have a longer expectancy of life than the men.

ALEUKEMIC MYELOSIS IN REMISSION SIMULATING BANTI'S DISEASE*

D. H. Miller, M.D.

A. H. Pemberton, B.A.

Wichita, Kansas

Downey¹ describes aleukemic leukemia as a disease with organ changes identical with those of leukemia and blood which shows no leukemic features. MacCallum² describes the condition as one in which there is a qualitative change in the white cells without any numerical increase. MacCallum prefers the term "aleukemic lymphadenosis" or "myelosis." Ferreta, quoted by Jaffe⁵ terms the condition a "closed myelosis" because of the failure of the proliferating immature cells of the marrow to find their way into the blood stream. Jaffe⁵ considers the absence from the blood stream of the cells growing so luxuriantly in the hematopoietic organs as the most striking feature of the disease. In connection with MacCallum's preference for the term "myelosis," leukemias are no longer considered as "diseases of the blood" but rather as disfunctions of the hematopoietic organs³.

Aleukemic leukemia may be either of the lymphatic or medullary types. A search of the available literature clearly indicates a marked preponderance of the lymphatic type. Harvey⁴ reviewed the records of the Royal Prince Alfred Hospital (Sidney) from March 1910 to March 1932. Of 163 patients with leukemia admitted during this period, eighty-eight were chronic and seven were acute myeloid leukemia; forty-three diagnosed as chronic and twenty-five as acute lymphatic leukemia. Among the last twenty-five patients were found all cases of aleukemic leukemia.

Among the few cases of aleukemic myelosis reported, we have found but one case in the literature which appears in any very marked degree to parallel the case here reported. Jaffe⁵ has reported a case in which the clinical diagnosis was Banti's disease; splenectomy was followed by death sixteen hours later. Jaffe remarks, in this connection, that "the chronic form, with the insignificant onset, the slowly progressive enlargement of the spleen and liver, the pale and grayish discoloration, closely resembles Banti's Disease." It is our opinion that the resemblance is so marked as to introduce a very definite

possibility of error in diagnosis, a possibility which can be eliminated only by autopsy.

Pinkerton⁶ reports a case which was diagnosed as Banti's disease and splenectomy done. The patient returned to the hospital two and a half years later with erythrocyte count of 2,010,000, leukocyte count of 180,000, and eighty-three per cent myelocytes. With radiation the count fell to 8,000; the patient lived only one month longer. Necropsy was not done. We are at a loss to reconcile the fact that this patient survived for two and a half years following splenectomy with the fact that splenectomy is fatal in aleukemic myelosis and of great benefit in Banti's disease unless it was a case of subsequent pathology.

Aside from the reports mentioned, the literature appears to be silent with reference to the particular manifestations presented by the case here reported—a symptom complex of some three years duration, which would amply justify a clinical diagnosis of Banti's Syndrome which, at autopsy, proved to be myeloid leukemia.

Numerous authors have called attention to the leukopenic phase which may occur in all types of leukemia, especially the acute forms³. This phase may be induced by treatment or may, on the other hand, be apparently spontaneous. Zimmerman and Curtis⁷ have mentioned a case of the former type which occurred in this hospital; Baldrige and Fowler⁸ have reported a similar case and one apparently of the latter type.

The immaturity of the cells may render diagnosis an extremely difficult matter. Pinkerton⁶ states: "It is fairly well established that there is a completely non-granular precursor of the myelocyte, which strikingly resembles the cells of the lymphocytic series." Piney⁸ has likewise called attention to the fact that the oxidase reaction cannot be depended upon to differentiate the early cells of marrow origin from the lymphoblasts, as they do not give a positive oxidase reaction. According to Kracke and Garver⁹ a negative oxidase test does not rule out the possibility of a predominance of myeloblasts. These authors, also Zimmerman and Curtis⁷, recommend the use of the indophenol blue synthesis test, which is positive in myeloid leukemia and negative in lymphatic. In our case, it should be noted that the oxidase reaction was negative in the case of the circulating blood and positive in the case of the bone marrow. (Fig. 1.)

CASE REPORT—The patient, a World War Veteran, was admitted to the Veterans' Administration Facility, Wichita, Kansas, on February 16, 1936. He was a white male, age forty-six, whose occupation before the war was that of a farmer and afterward that of an auto-mechanic.

He complained of weakness, pain in the abdomen,

*Published with permission of Medical Director of U. S. Veteran's Administration, who assumes no responsibility for the opinions expressed or conclusions drawn. Veterans' Administration Facility, Wichita, Kansas.

Acknowledgment is made to Dr. C. A. Helwig, of Wichita, for all photomicrographs used in the article.

bloating, boils and swelling of the legs. The family history was negative, particularly in reference to enlarged spleen and liver. He had had the usual childhood diseases and malaria in 1924. He denied syphilis and the use of alcoholic drinks. He had been married twelve years but his wife had never been pregnant. The patient had not been well for the past six years and had spent much of this time in bed. He has had numerous boils since the spring of 1935,

each one requiring several months to heal. He denied hemorrhages from the gums and vomiting blood. However, on admission there were subcutaneous hemorrhages around the eyes, which had appeared after vomiting. He became bedfast two weeks prior to admission.

Examination revealed an emaciated white male, who appeared critically ill. There were three pigmented areas on the abdomen where boils had

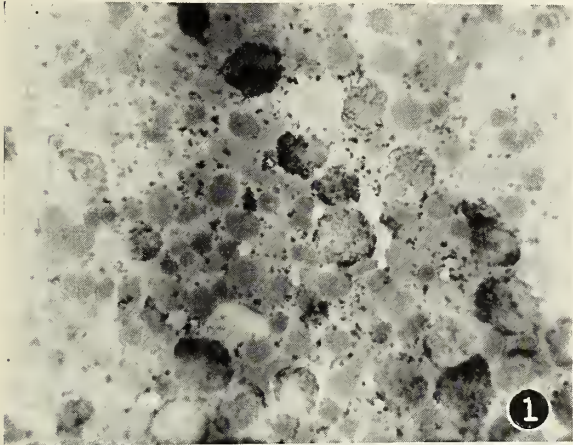


Fig. 1. Oxydase Granules. Goodpasture's Stain.

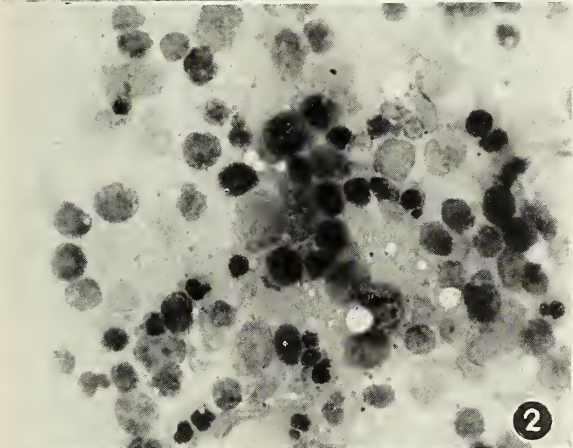


Fig. 2. Bone Marrow. Wright's Stain.

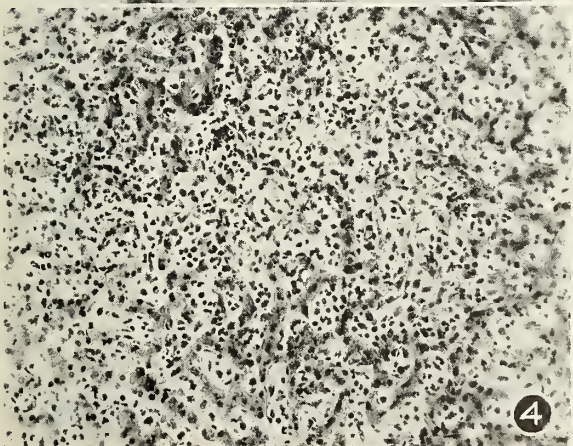


Fig. 3. Bone Marrow showing leukemic tissue. Hematoxylin Stain.

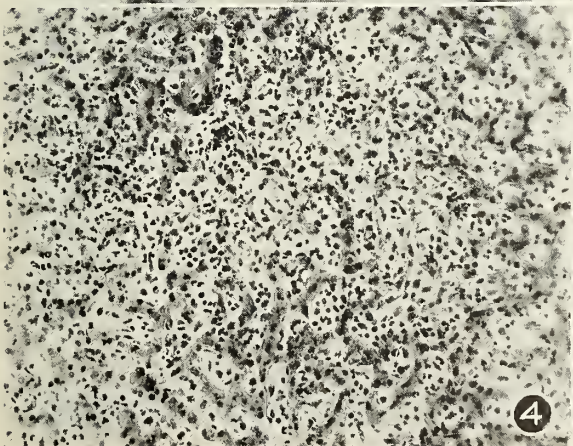


Fig. 4. Liver section showing leukemic tissue. Hematoxylin Stain.

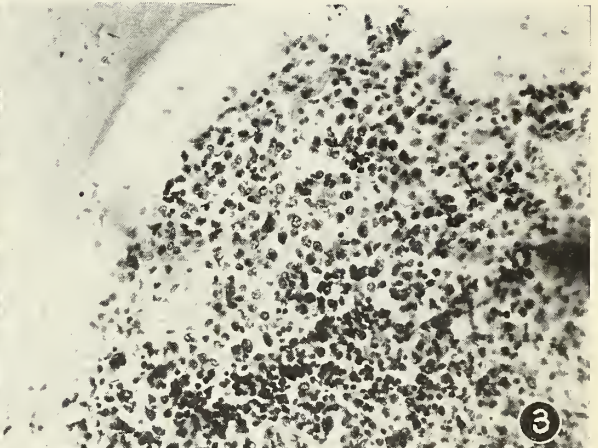


Fig. 5. Spleen. Hematoxylin Stain.

healed. The entire scrotum was pigmented and there were many such areas on the legs. There was an ulcer on the left scrotal sac about four cms. in diameter and excavating in character. The abdomen was rounded but no ascites was found. The spleen was enormously enlarged extending from the left costal margin into the pelvis and nine cms. to the right of the umbilicus. All reflexes were normal. Ophthalmoscopic examination revealed the disc margins to be hazy. The heart was not enlarged. There was a short systolic murmur which was but slightly transmitted to the left and though to be haemic in character.

The bedside x-ray was reported as showing the heart shadow normal in position and outline. It also showed a pathological infiltration involving the entire right lung field. The electrocardiogram showed tachycardia and left axis deviation. The Wassermann and Kahn blood tests were negative on two occasions. The urinalysis was negative. Three stool examinations were negative. A blood smear for malaria failed to reveal any parasites. A blood culture was negative after five days. The Van den Bergh indirect reaction gave 6.5 mgms. per 100 cc. of serum. The bleeding time was $6\frac{1}{2}$ and the clotting time $5\frac{1}{2}$ minutes. The blood counts are recorded on Table I.

In view of the history and blood findings during the early portion of his stay in the hospital, a clinical diagnosis of Banti's Syndrome was made. Splenectomy was at one time considered, however, during a consultation on this point, the surgical consultant refused to consider the question of splenectomy although in perfect agreement with the clinical diagnosis.

The patient's condition became progressively worse during his stay in the hospital. Death occurred March 19, 1936.

AUTOPSY PROTOCOL: Autopsy commenced three and one-third hours after death. Autopsy performed by Dr. E. F. Zimmerman.

External appearances; fairly well developed, poorly nourished adult. The body has had superficial arterial embalming. There are three pigmented areas, dark brown in appearance, over left rectus muscle, measuring 1 cm. in diameter. There are also pigmented areas over both legs. There is a necrosis involving the left anterior portion of the scrotum measuring approximately $4 \times 3\frac{1}{2}$ cm.; the edges are ragged, the base is pigmented and dry. There are healed right and left inguinal herniotomy scars. Decubitus ulcerations are present over the sacrum. The pupils are equal and round. Rigor mortis and posterior hypostasis are present. There is no edema of the legs.

Thorax and abdomen; there is a mass visible in the left abdominal area which distends this area. The subcutaneous fat and musculature are markedly atrophic. The abdominal cavity contains about 500 cc. of fluid. The transverse colon is displaced downward by a mass in the abdomen. The diaphragm on the left is at the fourth rib, on the right at the fourth interspace.

The left thoracic cavity is obliterated by dense adhesions. Crepitation is moderately diminished over the posterior aspect of both lower lobes. On section blood tinged frothy serum exudes. The pericardial sac is obliterated by adhesions. The chambers contain unclotted blood. The tricuspid admits four fingers. The wall of the right ventricle is thin, meas-

TABLE I

Date	R. B. C.	W. B. C.	H. B. %	Neutrophils	Eosinophils	Basophils	Lymphocytes	Large Mononuclears	Reticulo Endothelial	Stem Cells	Reider Cells	Normoblasts present	Nucleated Reds present	Leukoblasts	Blood Platelets	Basophilic stippling RBC	Polychromatophilia pres.	Color Index
Feb. 1936																		
17	4,350,000	1000	48	34	2		60	4										
20	3,300,000	650	50	30		5	65											
24	3,250,000	1000	68	38		2	60											
28	2,950,000	1200	64	12		2	86								80,000			
Mch.																		
2	3,400,000	1000	48	32			68								60,000			
4	2,720,000	1400	54	58			42											
9	3,480,000	2300	55	36	2	1	60	1										
14	3,560,000	9600	63	41	5		50			4		x					x	
15	3,760,000	6900	64	49	6	1	14		2	26	2	x				x	x	.9
17	3,880,000	14400	56	54	2		20	5	16	1			x	2			x	.85

uring three mm.; the musculature is soft and easily penetrated. There is roughening of the base of the mitral valve and small soft papillary projections extend from it. The coronary orifices and arteries are patent.

Abdomen; the spleen is markedly enlarged and adherent to the anterior abdominal wall by adhesions. There is a cleft at the lower end. It extends seven finger breadths below the costal margin and two fingers to the right of the midline. It is distended and deep purple in color. There is no thrombosis present, the splenic artery being tortuous but patent. The vein is patent as is the portal vein. On section the tissue is hemorrhagic and soft. There are small islets, grayish white in color, distributed through the spleen.

The spleen weighs 4500 grams. The liver is distended, weighing 2400 grams. On section it is pale, with irregular yellowish areas about the central veins.

The left kidney capsule strips with ease, the surface is finely granular and contains two small cysts. The right kidney is similar.

The adrenal glands are normal in size, the medulla is dark brown.

The mucosa of the stomach and esophagus are not abnormal. No hemorrhagic areas are visible.

Bone marrow; the bone marrow shows extensive hyperplasia of immature myeloid cells. These form far spreading islets in which red blood cells are completely eliminated. Eosinophilic myelocytes are prominent.

Wright's stain of bone marrow shows a preponderance of myeloblasts, leucoblasts and the more mature myelocytes with large numbers of eosinophilic myelocytes.

Goodpasture's stain revealed oxidase positive granules in the white cells.

Diagnosis: Myeloid Leukemia.

Spleen; there is a mild diminution in the size of the follicles. There is extensive myeloid metaplasia. Large mononuclear cells fill and distend the sinusoids. There is marked proliferation of the pulp. Nuclear debris is prominent.

Diagnosis: Myeloid metaplasia of spleen.

Liver; the sinusoids of the liver contain mononuclear cells. There is atrophy of the liver cords in areas that are, for the most part, adjacent to the central vein. In these areas large mononuclear cells are conspicuous. In other areas there are small nests of these cells.

Diagnosis: Myeloid infiltration of liver.

PATHOLOGICAL DIAGNOSIS

1. Myelogenous leukemia.
2. Pericarditis, chronic, fibrous.

3. Endocarditis, chronic.
4. Decubitus ulcers of buttocks.
5. Ulceration of scrotum.
6. Pleurisy, fibrous.

REFERENCES

1. Downey, Hal. In 'Bell's Text Book of Pathology. Lea and Febiger. 1930.
2. MacCallum's Text Book of Pathology. Saunders. 5th Ed.
3. Kracke, Roy B. and Garver, H. Differential Diagnosis of the Leukemic State. J.A.M.A. 104: 697-702. Mar. 2, 1935.
4. Harvey, Cotter. Aleukemic Leukemia. M. J. of Australia. Aug. 1932. 236-240.
5. Jaffe, R. H. Aleukemic Myelosis. Archives of Pathology and Lab. Med. vol. 3, 56-72. Jan. 1927.
6. Pinkerton, Henry. Aleukemic Leukemia and Atypical Leukemoid Conditions. Archives of Pathology. 7:567-600. April, 1929.
7. Zimmerman, E. F. and Curtis, Howard C. Aleukemic Myelosis with Cutaneous Nodules. Archives of Derm. and Syphilology. Vol. 33:684-688. April, 1936.
8. Piney, A. Recent Advances in Hematology. J. and A. Churchill. London. 1927. p. 43.
9. Baldrige, C. W. and Fowler, W. M. Aleukemic Myelosis. Archives of Int. Med. 52:852-876. Dec. 1933.

VITAMIN K*

Letteer Lewis, M.D.

McPherson, Kansas

This paper is a review of the literature and clinical experience on vitamin K to date. At the time this article was being prepared the exact chemical nature of vitamin K was unknown and was defined by the Mayo Clinic as "one or more fat soluble substances, a deficiency of which in the diet of chicks results in an abnormal tendency to bleed."

A substance possessing the activity of vitamin K has been previously isolated from tubercle bacilli, and thus named phthiocol.

However, in the September issue of the Journal of Biological Chemistry appeared a letter from Edward A. Doisy of the St. Louis University School of Medicine which read, "Degradation experiments which are being described elsewhere indicate quite clearly that vitamin K, is 2-methyl-3-phytyl-1, 4 naphthoquinone, $C_{31}H_{45}O_2$. The compound has been synthesized by Claisen's method for direct carbon alkylation from phytyl bromide and 1, 4-dihydroxy-2-methylnaphthalene. The isolation of this acid from the oxidation products clearly indicates that the nuclear structure, the positions of the substituents and the location of the ethylenic double bond are the same in both the natural and the synthetic compounds."

"The bioassay of the diacetyldihydro derivatives of natural and synthetic vitamin K, gave identical results. The potency of each was 660 units per mg.

In the same issue of the Journal of Biological Chemistry, R. J. Anderson and M. M. Creighton of Yale University describe how to synthesize phthiocol.

*Read before the Golden Belt Medical Society, in McPherson, Kansas, October 12, 1939.

The importance of this from our point of view clinically is in the price and method of administration. It is reported that preparing this vitamin synthetically is quite cheap, and it will now be in pure enough form to be administered intravenously.

One of the major difficulties in surgery of the biliary tract has been the lack of dependable means to prevent the occurrence of severe and often fatal hemorrhages following operation on jaundiced patients. Until recently we have had no means of determining which patients harbor this bleeding tendency, and there has been no entirely certain and satisfactory method of treating these hemorrhages when they occur.

It has long been appreciated that the bleeding tendency of jaundice defies the usual tests for clotting deficiency. The tests for clotting time or bleeding time ordinarily applied to "bleeders," regularly gave normal readings in jaundiced patients who subsequently had fatal post-operative hemorrhage. Special tests had been devised without satisfactory results until Quick in 1938 demonstrated that deficiency in the prothrombin content of the blood of the jaundiced patient makes him susceptible to uncontrollable post-operative hemorrhage. Quick has made available a quantitative test for the prothrombin bleeding time which provides desirable information as to whether the jaundiced patient is one who is likely to have a severe postoperative complication in the form of hemorrhage. It is true that many of the jaundiced patients do not bleed postoperatively, however, we had not previous means of identifying these patients.

This test consists of drawing four and five tenths cubic centimeters of blood from the veins of the patient and immediately mixing this with 0.5 cc. of sodium oxalate solution and centrifuging.

One-tenth cubic centimeter of plasma is then mixed with 0.1 cc. of thromboplastin solution, and 0.1 cc. of calcium chloride is quickly added. The time required for the formation of a clot after the addition of the calcium chloride is accurately recorded. Normal plasma will clot in from twelve to thirteen seconds. With a decrease in prothrombin the clotting time is delayed.

The composition of prothrombin is unknown; it may be well defined as a physiologic complex known only by its capacity to form thrombin and it is thought to be a protein.

It might be well here to review our physiology as to the mechanism of coagulation: Blood platelets on coming into contact with a surface such as damaged tissues, and damaged tissue itself liberate "thrombokinase." Thrombokinase, in the presence of ionic calcium, rapidly activates the large amounts of prothrombin present in the plasma into thrombin,

which in turn coagulates the fibrinogen into fibrin.

There is now general agreement that hemorrhagic diathesis in the presence of jaundice is not the result of any alteration in the amounts present of calcium, bilirubin, platelets, fibrinogen or thromboplastin. The original suggestion of Quick and his co-workers that the condition depended on a lack of the one substance necessary for coagulation not previously studied, namely prothrombin, has now been amply confirmed.

Quick has been able to control the other variable factors in the coagulability of the blood and so can determine quantitatively the deficiency in prothrombin in a test for prothrombin bleeding time. A prothrombin bleeding time of over forty-five seconds signifies that a hemorrhage may occur. (The highest prothrombin bleeding time recorded in the literature is one of four hundred seconds, ascertained in a test of blood taken from a patient who succumbed to hemorrhage.) Any prothrombin bleeding time higher than one hundred seconds signifies that the patient is in immediate danger of serious hemorrhage.

Another test which can be performed at the bedside of the patient is devised by H. P. Smith et al. This test consists of adding to two test tubes 0.1 cc. of thromboplastin solution. To one is added 0.9 cc. of normal blood and to the other is added 0.9 cc. of patient's blood. Each tube is inverted every second. The prothrombin time is then calculated by:
$$\frac{\text{clotting time of normal}}{\text{clotting time of patient}} \times 100 = \text{percentage of normal clotting activity.}$$
 Values below 100 per cent indicate a bleeding tendency. Hemorrhage will occur when the prothrombin falls to a level in the range of 30-50 per cent normal.

The writer himself and in correspondence with other users of this method find it of equal value to the Quick prothrombin time and much more usable because of the fact that it is a bedside procedure and the end point reaction is more definite.

The thromboplastin is prepared by soaking ground ox lung in saline solution for several hours with frequent shaking. The solution is then centrifuged and the supernatant liquid used. The thromboplastin of suitable potency will cause normal blood to clot in thirty-five seconds.

Even this simple method, however, does not eliminate the need for a solution of thrombokinase (thromboplastin) which unfortunately is subject to deterioration with age.

The "serum volume test" of Boyce and McFetridge does not have this disadvantage, and is claimed by its inventors to be a reliable index of the bleeding tendency in jaundice. It is not, however a measure of prothrombin. In this test, an arbitrary amount

of blood is taken from the patient and placed in a graduated tube. It is allowed to clot spontaneously, and, after standing four hours, the clot is removed and examined for consistency. The clot in the hemorrhagic diathesis is friable and does not contract on standing. After removal of the clot, the volume of serum is noted. With normal blood, the amount of serum left in the tube should be about one-half the original volume of blood taken; in the hemorrhagic cases, the volume is much smaller. The "serum volume index" is obtained by dividing the serum volume, expressed as a percentage of the original amount of blood, by 50. In severe cases of bleeding, the index may go as low as 0.1.

Many therapeutic measures have been undertaken to control postoperative hemorrhage in the jaundiced patient; among which were glucose intravenously, bile and bile salts via the gastro-intestinal tract, and blood transfusions. Glucose undoubtedly aids the damaged liver but a liver whose outlet is obstructed is not well able to utilize the glucose. Replacement of bile and bile salts into the gastro-intestinal tract overcomes to some extent the deficiency which exists in this respect, but that this deficiency is not the only factor present in the bleeding tendency of jaundiced patients is evidenced by the fact that patients with bile fistulas without jaundice are not so susceptible to hemorrhage as are the patients suffering from obstructive jaundice. Transfusion has been the greatest aid in the treatment of bleeding of jaundiced patients, but its benefit is transitory. Transfusion not only replaces the lost blood, but supplies the deficient element (prothrombin) for clotting. A hemorrhage may stop, as the result of a transfusion only to start up again in a few hours or in a day or two.

After the obstruction to the common duct has been released by operation and a free flow of bile into the intestines has again been effected, the patient is on his way to recovery. An interval exists, however, between the operation and such time as the patient is able to utilize the benefits of the operation; and during this interval unhappily the patient may lose his life as a result of hemorrhage. The bile formed by a badly damaged liver is deficient in bile salts, which may at times be as low as ten per cent of the normal concentration. It is also some time after the operation before the patient is able to consume and utilize food.

The administration of the so-called vitamin K together with bile salts administered both pre and postoperatively aids greatly in carrying the patient over the dangerous interval until he is able to benefit from the operative release of the obstruction

which caused the jaundice.

Vitamin K or the "Koagulation Vitamine," was discovered by Danish investigators to be the lacking accessory dietary factor in the hemorrhagic diathesis in chicks suffering from dietary deficiency. It is present in adequate quantities in a balanced diet but being a fat soluble vitamin it is not well absorbed from a gastro-intestinal tract which is bile lacking, therefore its administration is accompanied by the feeding of bile salt tablets in order to enhance its absorption and utilization.

It is obvious that normal absorption of a fat soluble material from the intestine cannot take place unless an adequate and physiologically intact intestinal surface is available. Recently cases of deficiency of prothrombin concentration have been reported that were due to a K-avitaminosis which resulted apparently from an inadequate intake of food, abnormal or insufficient intestinal absorptive surface or both.

The liver is assumed to be the site of formation of prothrombin, as indicated by the studies of Smith and his associates, however, it has been proved that in certain instances patients presenting every known clinical evidence of hepatic insufficiency, and who have exhibited maximal degrees of physiologic disturbance have been able to absorb and utilize vitamin K and maintain normal values for the concentration of prothrombin in the blood, however certain patients having severe hepatic damage do not present the usual prompt response in prothrombin clotting time following the administration of vitamin K.

In a report of seventy-three cases of the Mayo Clinic, all of whom had clinical jaundice and all but nine had some type of surgical procedure performed, bleeding occurred after surgery in only thirteen cases (6 per cent), and before operation in only two cases. In another series of sixty-three patients reported elsewhere; eight received no concentrate of vitamin K or bile salts previous to operation, and bleeding occurred postoperatively in five of these eight cases (63 per cent). This incidence of bleeding is about sixteen times greater than the incidence of postoperative bleeding in the group of forty-five patients to whom concentrates of vitamin K and bile salts were given both before and after surgical intervention, of the two patients of this group who bled, (4 per cent), one had only slight oozing of blood from the T tube and the other patient had pyloric obstruction of a degree which precluded successful treatment.

In another series vitamin K concentrates and bile salts were administered to ten patients before but not after operative procedures. Only one patient

bled to a serious extent, and he had received inadequate amounts of vitamin K before surgical treatment. The analysis of these cases closely coincides with other reports.

Crile pointed out that hemorrhage had been the greatest cause of post operative death in jaundiced patients, accounting for thirty-four per cent of the fatalities. He reported a striking case in which bile and vitamin K reduced the prothrombin time from sixty seconds to a normal value within twenty-four hours.

In Scotland, Illingworth analyzed a series of 4,000 cases of operation on jaundiced patients prior to the use of vitamin K. Hemorrhage accounted for the fatalities in sixteen per cent.

The effectiveness of vitamin K in the treatment of hemorrhagic diathesis of jaundice has prompted an investigation of its possible application in other hemorrhagic states.

Since vitamin K is very poorly stored in the body, and since the diet of the newborn may be quite deficient in vitamin K, one might expect a deficiency of vitamin K to occur in some babies. Several investigators have found low prothrombin levels in the blood of newborn infants, and some of them believe that certain hemorrhagic diathesis seen in this period of life may have this as their cause. More work must be done in this field before we will know if it lowers the incidence of intracranial hemorrhage in the newborn.

Vitamin K has also been administered to cases of hemophilia, menorrhagia, metorrhagia, essential thrombocytopenic purpura, toxic purpura, essential hematuria, Banti's syndrome, uncomplicated hemolytic icterus, familial bleeding tendency, aplastic anemia, and hemorrhagic duodenal ulcer, and in no instance was the normal prothrombin clotting time altered nor was the tendency to bleed affected appreciably.

One case of retinal hemorrhage (essential) was reported arrested by the use of concentrated vitamin K.

Vitamin K has undoubtedly saved many lives during the past year which otherwise would have been lost.

CONCLUSION

The prothrombin time of each patient who has jaundice should be determined and each patient who has jaundice and undergoes an operation should receive several prophylactic doses of concentrated vitamin K and bile salts preoperatively. Postoperatively the prothrombin time should be checked frequently and vitamin K administered as necessary.

Further study will tell us of any value of Vitamin

K in the reduction of the incidence of intracranial hemorrhage in the newborn.

At this time vitamin K has little demonstrable value in decreasing abnormal bleeding tendencies in the human other than that which results from jaundice.

SUMMARY

1. The exact chemical nature and potency of vitamin K is given.
2. The Quick and Smith et al tests for prothrombin bleeding time is given. The "serum volume test" of Boyce and McFetridge is also given.
3. The physiology of normal clotting is reviewed.
4. The former therapeutic measures that were undertaken in an attempt to control the postoperative hemorrhage in the jaundiced patient is discussed.
5. The administration of vitamin K and bile salts is discussed.
6. The percentage of deaths before and after the administration of bile salts to jaundiced patients is discussed.
7. The use of vitamin K in expectant mothers to prevent hemorrhagic diathesis of the newborn is mentioned.
8. Other bleeding conditions are mentioned in which vitamin K was administered with no appreciable effect.
9. Vitamin K has undoubtedly saved many lives during the past year.
10. Conclusion.

REFERENCES

- Butt et al, Proc. Staff Meetings Mayo Clinic 13:74, 1938.
 Dam and Glavind, Lancet 234:720 1938.
 Quick, A. J. and Grossman, A. M., Proc. Soc. Exp. Biol. And Med. 40:647 April 1939.
 Dam and Glavind, Biochemical Journal 32: 1018, 1938.
 Snell, A. M., JAMA 112:1457 April 15, 1939.
 Smith, H. P., et al: JAMA 113:380 July 29, 1939.
 Dam, H., Tage-Hansen, E. and Plum, P., Ugeskrift for Laeger, 101:896 August 3, 1939.
 Butt et al: IBID Page 383.
 Vitamin K, editorial, IBID Page 417.
 Crile G. Jr., Cleveland Clin Quart., 6:116 1939.
 Butt, Snell and Osterberg; Proc. Staff. Page 48.
 Meet. Mayo Clin.: 13:7530764 Nov. 30, '38.
 Illingworth, C.F.W., Edinburgh Med. J., 46:32 March 1939.
 Butch & Meade, Minn. Med. 22:32-33 Jan. '39.
 Illingworth, C.F.W., Lancet, 1:1031 May 6, 1939.
 Greaves, Am. J. Physio.—125:423-428 March 1939.
 Olson, J. Iowa M.Soc. 29:103-104 March 1939.
 Quick, JAMA 1658-1662 May 14, 1938.
 Doisy, Edward A., Jour. Biol. Chem. September 1939.

Clotting factor in stored blood declines after nine days: Bank or stored blood is an adequate source, for only about nine days, of plasma prothrombin, the clotting factor which helps prevent hemorrhages, Jere W. Lord Jr., M.D., and John B. Pastore, M.D., New York, declare in The Journal of the American Medical Association for Dec. 16.

Longer intervals of storage cause the plasma prothrombin to decline gradually. By the end of the third week of storage, the amount has dropped to six-one per cent of the normal prothrombin.

NON-RADIATING LOW BACK PAIN

R. J. Dittrich, M.D.,

Fort Scott, Kansas

Among patients with disabilities of the lower spine, a certain proportion present symptoms which are rather sharply limited to small areas of the back, without radiation to other parts of the body. The chief complaints of such patients are pain, consisting of a constant dull ache; weakness of the back in performing ordinary tasks, and excessive fatigue on exertion. On examination, very little evidence of disability is found with the exception of a localized tenderness in the region of the back in which the subjective manifestations are most prominent. Pain on ordinary movements of the spine may be aggravated or unchanged.

In four patients with this clinical picture, roentgenographic examination of the lower spine revealed in the sacrum, defects which were interpreted as spina bifida occulta. Following experiences with other forms of low back pain showing similar roentgenologic evidence, operation was undertaken for the purpose of removing intraspinal abnormalities which were considered to be responsible for the symptoms. The pathologic findings at operation consisted of varying amounts of epidural fat and fibrous tissue, surrounding the nerve roots. All four patients had prompt relief from their symptoms after operation and have remained free for the entire period of observation.

CASE REPORTS

CASE 1. Mrs. L. H., white, age twenty-eight, was seen in October, 1936, complaining of pain in the lower back. This case on about a year previously without any apparent cause as illness or injury, is dull and aching in character and does not radiate. It is present constantly, regardless of position and is least severe when the patient is lying on her back. She tires easily at work; after doing light house work for one-half hour, she has to rest. She stated that she had a weak back all her life.

Examination revealed only one positive finding—tenderness on pressure over the middle portion of the sacrum in the midline. There was no limitation of motion in the spine, although all movements were executed slowly and cautiously. Pressure over the middle and lower parts of the sacrum aggravated the pain which formed the patient's complaint.

Roentgenographic examination of the lower spine

showed a lack of fusion of all sacral laminae below the second.

Operation was undertaken on November 4, 1936. The laminae of the upper four sacral segments were exposed. The spinous process of the second sacral was absent. At the level of the third and fourth sacral vertebrae, the laminae were incomplete, the gap being covered with a dense fibrous membrane. This was incised to open the spinal canal. The first and second sacral laminae were removed. At the level of the third and fourth sacral segments, the nerve roots were covered by a layer of fat tissue. This was present on both sides of the midline but did not extend above the level of the third sacral. The fat was soft, interwoven with fibrous strands and loosely adherent to the nerves. After removing this tissue as completely as possible, the incision was closed.

The specimen of fat tissue was examined by Dr. C. A. Hellwig who reported as follows: "Microscopically, a few bone trabeculae with normal cells are in the section. The fat tissue shows areas of fresh and old hemorrhage. In several lobules, marked round cell infiltration is noticed."

Post-operative course. Recovery was favorable. At the time of dismissal from the hospital, two weeks after the operation, she was free from pain. During the next few weeks she gradually resumed her household duties.

The patient was seen at intervals for a period of three years. During that time there has been no recurrence of symptoms. She states that she is able to be much more active physically. The only complaint is a mild stiffness of the lower part of the back.

CASE 2. R. W., white male, twenty, was seen in January, 1937, complaining of pain in the lower part of the back. In 1934 he underwent an appendectomy under spinal anesthesia. While convalescing from this operation, he noticed a dull ache in the lower back. This became more pronounced after he resumed activity and soon was found to be a decided handicap in any physical effort entailing movement of the spine. It was present constantly and was especially severe in forward flexion of the spine. He was unable to lift even light weights when in a stooped position. He was able to walk a distance of five to six miles without undue fatigue. He could not perform work on a farm or in a coal mine. At night he wakes up a number of times due to pain. The condition has become gradually more pronounced. His general health has been good and he has had no serious illness otherwise.

On examination the most important finding was tenderness over the upper part of the sacrum in

the midline. Pressure in that area produced or aggravated the pain of which he complained. All movements of the spine were painful, though not greatly restricted. There was no radiation of the pain and no other positive findings were noted.

Roentgenographic examination of the spine showed absence of the first sacral spinous process. There was a defect of the laminae, involving the entire first sacral and the upper portion of the second sacral segments.

Operation, February 10, 1937, consisted of removal of the upper three sacral laminae. On the ventral surface of the second sacral lamina, six or seven bands of fibrous tissue were attached, extending into the canal. These varied from one-half to one millimeter in thickness. They were attached also to the layer of fat tissue which covered the postero-lateral aspect of the dural sac and the nerve roots distal to the sac. The fat tissue was soft and loosely adherent to the sac and the nerves. It was removed as completely as possible.

The specimen was examined by Dr. C. A. Hellwig who reported as follows: "Microscopically, the small fragments of fat tissue contain fibrous strands and there is evidence of old and fresh hemorrhage."

The post-operative course was satisfactory. Twelve days after operation, he was allowed to walk and several days later was dismissed from the hospital. He was free from pain and during the next few weeks he became gradually more active. Four months after operation he stated that he had been engaged in various forms of labor, mostly as a house painter. He could spend ten hours a day at such work without recurrence of symptoms. In addition he took part in boxing and wrestling. He has performed various forms of manual labor without difficulty and has been free from symptoms for approximately three years.

CAES 3. Mrs. M. P., white, age thirty-five, was seen in September, 1939, complaining of pain in the lower part of the spine. This had begun about three months previously without any known cause. The pain was limited to the lower portion of the sacrum, consisted of a constant ache and did not radiate. It was aggravated by movement, so that it was impossible for the patient to perform her customary household duties. Many times she was unable to sleep without walking up several times during the night.

Examination revealed a mild degree of tenderness throughout the entire sacrum in the midline and at several points immediately lateral to the midline. There was no tenderness of the spine or the paraspinal muscles above the level of the sacrum. Neither was there any tenderness or indication of

pain in the lower extremities. Tendon reflexes were normal. Pelvic and rectal examination by the attending physician showed no abnormalities of the pelvic organs. On rectal examination, a marked tenderness was elicited by pressure over the anterior aspect of the lower segments of the sacrum, in the midline. There was no swelling or induration or other abnormality to account for the tenderness.

X-ray examination of the spine showed an irregular fusion of the laminae of the first sacral segment and on both sides of a rudimentary first sacral spinous process, a small defect of the laminae.

The patient was advised to limit her physical activities, and was treated with infra-red therapy and large doses of Vitamin B. After two weeks under this regime the pain was noticeably alleviated, though not eliminated. About two months later the pain became more pronounced and was gradually progressing in severity. There was no change in the location or the nature of the pain. Also tenderness, as previously noted, was more marked. For these reasons operation was advised.

Operation, January 6, 1940, consisted of laminectomy of the upper three sacral vertebrae. Fat tissue in the sacral canal was, in several places, firmly adherent to the sacral internal periosteum. Several slender but firm adhesions were seen to arise from the internal periosteum, to become attached to the fat tissue. The sacral dura and nerve roots were covered by soft fat tissue which was interwoven with fibrous bands. Practically all the nerve roots, after removing the fat tissue, were seen to be covered with a thin, irregular, tissue-like membrane. This seemed to involve the perineurium and from several of the nerves, slender strands of tissue connected them to the adjacent bone. Both the fat and fibrous structures were removed as completely as possible.

The immediate results of the operation are satisfactory in the sense that the patient at this time, four weeks post-operative, is free from the pain.

CASE 4. V. J. S., white female, age ten, entered the hospital in December, 1937. Her complaint was pain in the lower part of the back. This began three months previously, without any known cause. Pain is present more or less constantly, and most marked in the morning on getting up. It does not interfere with sleep. Since the onset it has been progressing in severity. She never had any pain due to radiation in the upper part of the back or in the lower extremities.

Examination showed no postural abnormalities. Movements of the spine are free but caused pain

in the back, located in the upper lumbar region. On palpation, acute tenderness is elicited in the spinous processes of the first and second lumbar segments and the paraspinal muscles at that level. Tenderness is less pronounced at the level of the third lumbar and mild at the level of the fourth lumbar vertebrae. There is no tenderness of the spine or the muscles, above or below that area. Likewise, no tenderness can be elicited in the muscles of the upper and the lower extremities.

The knee jerks are irregularly obtained. Otherwise the reflexes are normal.

Roentgenographic examination of the spine showed a cleft of the first sacral laminae. No abnormality of the lumbar vertebrae was seen in antero-posterior or lateral views.

Observation in the hospital for several days failed to disclose any disability such as she was said to have. She was very active without complaint of pain. She was dismissed for further study.

Two months later, her parents stated that pain and disability were progressing. She had become less active and her sleep was disturbed by the pain. Examination showed less marked tenderness in the third and fourth lumbar levels. Also, tenderness was elicited in the muscles of the calf of the right leg. An operation was advised, but was declined.

COMMENT. The operation which seemed advisable was a laminectomy of the upper lumbar vertebrae, where the clinical manifestations were more pronounced. Although the sacrum was the site of a spina bifida occulta, and the roentgenographic examination of the upper lumbar spine showed no abnormality, the clinical findings suggested, for the upper lumbar region, the same intraspinal alterations as were found in the sacral canal in other cases.

The patient returned one month later for operation.

Operation, March 8, 1938, consisted of a laminectomy of the first and second lumbar segments. After exposing the laminae, the ligamentum avum was incised between the two laminae and a portion of this removed. Through the opening thus made into the canal, the epidural fat protruded, suggesting that this was under abnormal pressure. The epidural space was entirely filled with fat tissue which was connected to the ventral surface of each lamina by several strands of fibrous tissue, varying from one-half to two millimeters in thickness. The fat tissue was interlaced with numerous slender bands of fibrous tissue, which extended laterally and ventrally along the dural sac. These could not be traced but they were firmly attached to structures in the antero-lateral part of the canal. The fat and

fibrous structures were removed as completely as possible.

Examination of the tissues removed at operation by Dr. C. A. Hellwig, yielded the following report: "Microscopic examination of the fat shows areas of fibrosis; evidence of fresh and old hemorrhage are noticed. There is no inflammation or calcification. Examination of the ligamentum flavum reveals large areas with complete loss of elastic fibers and other areas showing partial degeneration of the fibers."

POST-OPERATIVE COURSE. Twelve days after operation there was no indication of pain or tenderness. She was examined at intervals for eight months and during that time she had neither any subjective or objective evidence of her former complaints. A report from a visiting nurse in August, 1939, stated that she had no pain or disability.

DISCUSSION

Analysis of the four cases shows that this ailment is, in some respects, similar to the forms of low back pain with "sciatica." The greatest difference is in the symptomatology. The resemblance to other forms of disease is most strikingly seen in the intraspinal abnormalities—the changes in the epidural fat and the existence of fibrous adhesions between the bony and the nervous elements within the spinal canal. The mechanism of production of symptoms is that of direct irritation of the nerve roots by such abnormalities. No information is available to explain the absence of radiation of the pain which is commonly found in cases of low back pain.

SUMMARY

In four cases of low back pain without radiation, the symptoms consisted of a constant dull ache, situated in the lower back and aggravated by movements of the spine; additional complaints are weakness and excessive fatigue. Objectively, the most important finding is pressure tenderness over the spine in the midline and in the muscles immediately lateral to the midline. In three cases, the clinical manifestations were most prominent in the sacrum; in one case in the upper lumbar segments. Roentgenologically, the sacrum shows anomalies which are interpreted as spina bifida occulta. Pathologic alterations consist of changes in the epidural fat and fibrous adhesions between the laminae and the nerve roots. Both of these features are considered responsible for production of symptoms by mechanical irritation of the nerves in the canal. Treatment, consisting of surgical removal of the harmful influences, has provided relief in all cases.

REFERENCES

- Dittrich, R. J., Roentgenologic Aspects of Spina Bifida Occulta, *Am. J. Roentgenol. & Rad. Ther.*, XXXIX, 937, (June) 1938.
- Dittrich, R. J., Muscular Rheumatism and Spina Bifida Occulta, *Am. J. Surg.*, XLII, 318, 1938.
- Dittrich, R. J., Low Back Pain and Spina Bifida Occulta, *Am. J. Surg.*, XLIII, 739, 1939.

EPIDEMIC CEREBROSPINAL MENINGITIS

COMPARISON OF SERUM AND SULFANILAMIDE TREATMENT

Robert M. Isenberger, M.D.*

Kansas City, Kansas

Statistics should be interpreted carefully in this disease, because there are many factors governing prognosis. Some acutely fulminating cases die too quickly to be helped by any present-day method of treatment. Other patients get well easily and quickly with few treatments by various methods. However, the cytological, bacteriological and chemical changes in the cerebrospinal fluid give direct evidence of the progress or arrest of the infection; hence, clinical improvement and the effects of treatment can be judged with greater precision than is possible with other acute infections in which there is a high mortality.

The value of serum in the treatment of meningococcic meningitis has been generally accepted for nearly thirty years. In spite of this there is still a wide divergency of opinion in regard to its proper administration. Certain factors contribute to the confusion of ideas. In the first place, no absolutely uniform rules can be laid down for treatment, since the disease varies so widely in its manifestations in different outbreaks (at times the meningococcemia predominates the picture and at other times, the meningitis) and at all times in individual patients. Secondly, there is, unfortunately no absolutely reliable laboratory test for the therapeutic value of the serum. For this reason, at times serum of poor quality has been used with resulting failure of proper response on the part of the patient. Under these conditions, in desperation physicians have resorted to larger and larger quantities of serum in the hope of obtaining better results.

Buttle, Gray and Stephenson (1936) first demonstrated the protective action of sulfanilamide against experimental meningococcic infection. Whitby (1937) reported a mortality of 16.6 per cent in treated mice as against seventy-two per cent in controls. It is now apparent that experimental meningococcal infections are far more susceptible to chemotherapy by organic sulfur compound than are those produced by the hemolytic streptococcus.

The experimental observations in mice have been amply confirmed in the treatment of meningococcic meningitis in man. Schwentger, Gelman and Long

treated ten patients with one death, using sulfanilamide parenterally and intrathecally. The spinal fluid cultures in all patients were sterile within three days after the treatment was started. Banks (1938) obtained better results (Table 1) with sulfanilamide alone by mouth than with serum alone or with a combination of serum and sulfanilamide. However he advocated combined serum and sulfanilamide treatment.

TABLE 1

	Cases	Mortality %
Serum treated	38	16
Serum and sulfanilamide	59	11.8
Sulfanilamide alone	16	6.25

On the other hand Eldahl (1938) treated twelve cases of meningococcic infection with daily intrathecal injections, with a twenty-five per cent mortality. He considered oral treatment to be ineffective.

Muraz, Chirle and Quequiner have furnished abundant data (Table 2) from experiences during the epidemic of meningococcic meningitis among the natives of French Nigeria in 1937-38. They reported a control fatality rate of 74.6 per cent among 8,653 patients in British Nigeria during the early part of 1937.

TABLE 2

	Cases	Death	Mortality %
Serum treated	49	11	22.44
Sulfanilamide intraspinal-ly and by mouth....	54	8	14.8
Sulfanilamide by mouth alone	271	29	10.7
Serum and sulfanilamide by mouth	23	2	8.7

Recently Waghelstein has reported the treatment of 474 patients (Table 3). A most favorable effect was noted in the reduction of the number of patients who died within twenty-four hours after institution of treatment, demonstrating the effects of intensive sulfanilamide therapy upon patients who were severely ill. The number of recurrent infections were much lower in patients treated with sulfanilamide and the average duration of hospitalization was markedly reduced, compared with those who received serum.

TABLE 3

	Cases	Mortality %
Serum treated	368	26.9
Serum and sulfanilamide	34	23.52
Sulfanilamide alone	72	15.27

Place of Boston treated twenty-five patients (Table 4) showing meningocci by blood or spinal fluid culture or by smear. Sulfanilamide was given by mouth in doses ranging from 60 to 120 grains daily divided at four-hour intervals. Convincing evidence was the rapid clinical improvement even

*Department of Pharmacology, University of Kansas School of Medicine, Kansas City, Kansas.

in apparently moribund cases, and the prompt bacterial clearance of the spinal fluid. In only seven of the twenty-five patients could meningococci be obtained after the first day of treatment; one for five days, two for three days, and four for two days. By contrast, in the serum treated cases meningococci were obtained from the spinal fluid in forty per cent after the first day and up to twenty-five days.

TABLE 4

Cases	Date	Mortality %
State of Massachusetts	1926-1936	43
State of Massachusetts	1936	48.7
Serum treated	44 1936-1937	47.7
Sulfanilamide treated	25 1937-1938	12

In the sulfanilamide treated series three deaths occurred nineteen, twenty-seven and thirty-two hours after admission.

Whitby (1937) also found sulfapyridine as active, or more active than sulfanilamide against meningococci in mice. Hobson and McQuade (1938) have treated six patients without a death.

SUMMARY

1. The accumulating clinical evidence strongly suggests that chemotherapy alone if adequately used is efficient and that serum is usually unnecessary in meningococcic meningitis. Sulfanilamide therapy has changed the treatment of this disease to a relatively simple procedure.

2. In a total from the literature of 136 cases receiving some form of sulfanilamide therapy and serum, there was a mortality of 13.9 per cent and of 510 cases so treated but without serum the mortality was 11.4 per cent.

3. Long and Bliss have recommended the following dosage:

Size of Patient	Initial Dose	Subsequent Dose
100 lbs.	50-80 grains	15 grs. every 4 hrs.
50-90 lbs.	30-50 grains	10-15 grs. every 4 hrs.
25-50 lbs.	20-30 grains	5-10 grs. every 4 hrs.

Effective levels in the blood may be as low as 4 to 5 mg. per 100 c.c. but the optimum is 10 mg. or more, and, in the spinal fluid, at least 5 mg. per 100 c.c.

4. The sulfanilamide should be continued for at least three days after clinical and bacteriological clearance, and then the dosage should be reduced over the next seven days to prevent recurrences.

5. Whereas some workers have stressed the desirability of giving the drug intrathecally others have pointed out that sulfanilamide readily penetrates into the cerebrospinal fluid, and intraspinal injections are usually unnecessary.

6. Although available clinical evidence points to the peroral administration of sulfanilamide alone

as being the most satisfactory method of treating meningococcic meningitis, the possibility that the drug in combination with a good antiserum might prove more effective is not to be ruled out.

7. It is important in administering sulfanilamide to make frequent complete blood counts.

REFERENCES

1. Smith, Maxson, Murphy: Meningococcus Meningitis. Southern Medical Journal, 31, 1168-1171, November, 1938.
2. Appelbaum, Emmanuel: Immunological Aspects and Treatment of Meningitis. Archives of Pediatrics, 55, 400-415, 1938.
3. Findlay, G. M.: Recent Advances in Chemotherapy. Edition 2. Blakiston, Philadelphia, 1939, 392-395.
4. Long, Perrin H. and Bliss, Eleanor: Clinical and Experimental Use of Sulfanilamide, Sulfapyridine and Allied Compounds. Macmillan, New York, 1939.
5. Hobson, F. G. and Oxon, D.M., and MacQuaide: Treatment of Meningococcal Meningitis with Sulfapyridine. The Lancet, 235, 1213-1217, November 26, 1938.
6. Neal, Josephine: The Treatment of Acute Infections of the Central Nervous System with Sulfanilamide. J.A.M.A., October 8, 1938, 1353-1356.
7. Place, Edwin: Sulfanilamide in Meningococcic Infections; Medical Clinics of North America, September, 1939, 1159-1172.

RETROPERITONEAL CYST SIMULATING APPENDICITIS

Maurice A. Walker, M.D.

Clay E. Coburn, M.D.

and

Alice Pendleton, M.D.

Kansas City, Kansas

A white girl, aged twenty-seven, had had occasional episodes of pain the right lower portion of the abdomen for five years. At each attack a mild ache would gradually become more severe, culminating after a few days in nausea and vomiting. Sometimes she had fever, which at no time exceeded 100 F. Each attack lasted about one week with no distress in the intervals. During the three or four attacks which had occurred in the last year, there had also been pain in the upper portion of the abdomen, radiating to the right lumbar region.

She was somewhat obese, weighing 160 pounds. There was tenderness over the entire right side of the abdomen. No masses could be palpated in the abdomen or pelvis. General physical examination revealed no further evidences of disease. A diagnosis of appendicitis was made. Because of the increasing severity of the attacks, operation was advised.

At operation on November 11, 1937, the appendix was free in the peritoneal cavity without inflammatory changes. The cecum and ascending colon were raised from the parietal peritoneum by a blue, lobulated cyst extending from the pelvic brim almost to the diaphragm, pushing the kidney upward. After

(Continued on Page 261)

President's Page

To the Members of The Kansas Medical Society:

It is to be hoped that every member of The Kansas Medical Society will familiarize himself with the contents of the bulletin recently issued by the Committee on Medical Economics relating to indigent medical care, reprinted in this issue.

Medical care for the indigent with local determination of needs as well as local control of administration is adequately provided for in any one of the suggested plans.

The new procedures which have been made available will undoubtedly attract the attention of local boards of social welfare. State and possibly Federal participation, together with the simplified accounting requirements, furnish a great opportunity for our general betterment.

Sixty-five of our county medical societies are now operating with either a "Lump Sum, Per Capita or Controlled Fee Schedule" plan. These societies are moving along and getting the job done. Indigent sick folk are adequately cared for, the local welfare boards are pleased with the service, and provision is made for medical costs.

County medical societies without a plan are missing an opportunity to render the greatest possible service to the indigent sick of their community on an economy basis. It is time to discard obsolete methods of caring for the indigent sick. The principle of free choice of physician should apply in every community. It is impossible for one physician to care for all the needy sick within his county. Unjust criticism is directed against those in authority as well as members of county medical societies when such methods of care are allowed to prevail.

If your Committee on Medical Economics can be of assistance in the remodeling of an old plan or the development of a new indigent plan for your county please communicate with them at once.

Sincerely,

A handwritten signature in dark ink, reading "Loren L. Leland M.D." in a cursive script.

President, Kansas Medical Society.

EDITORIAL

THE EMIGRE PHYSICIAN

The April issue of the *FEDERATION BULLETIN* carries two articles dealing with the problem of the emigré physician. As this bulletin is the official publication of the Federation of State Medical Boards of the United States, it is highly significant that two such fair minded statements on the subject should be published at this time.

Dr. Joseph Pratt's article presents a most intelligent view of the whole medical emigré problem. He refers to the ideals and aims of Osler in the development of American medicine and points out the danger to democratic principles in "that attitude of mind which brooks no regard for anything outside his own circle and his own school," a definition used by Osler for the term chauvinism which he feared in his own day.

Dr. David L. Edsall, whose article appears in the same issue of the *FEDERATION BULLETIN*, is Honorary Chairman of the National Committee for the Resettlement of Foreign Physicians. His article covers the subject so comprehensively that it is impossible to here review it adequately. The full text should be studied carefully by all members of state boards of licensure. Dr. Edsall states that it is neither the desire nor the purpose of the National Committee for the Resettlement of Foreign Physicians to flood any state with an unlimited number of unselected physicians. The Committee does believe that the present attitude of some medical men toward the emigré physician has been based on a complete misapprehension and needless panic in regard to the actual number of refugee physicians. Actually less than 1500 await the opportunity to practice medicine in America. He points out that there are at least that many communities throughout the country where medical service is inadequate, because American physicians have found more desirable locations in which to practice and refugee physicians cannot obtain license to practice in their place. With the presentation of these facts the National Committee feels that immediate action is necessary and the following recommendations are made.

1. That states which do not require citizenship by statute and which have a reciprocal licensure clause with any other state grant reciprocity to foreign physicians already licensed by examination in that state.

2. That the fifteen states requiring citizenship by regulation of the state board change this requirement to first papers, adding a clause to the effect that the license of a physician who does not become a citizen at the expiration of the period required by the state department may be revoked.

3. That all state boards of medical examiners accept the list of accredited foreign medical schools utilized by the National Board and thereafter evaluate foreign physicians on their own merits and by examination rather than reject them by ukase.

4. That states which do not have statutory requirements but desire further evidence of competence in addition to a written examination shall grant temporary licenses specifying localities and conditions of practice—the license to be made permanent when the physicians attain full citizenship.

5. That where statutes have been passed requiring citizenship or graduation from an American university consideration be given to the desirability of repealing such statutes and substituting for them suitable regulations by state boards of medical examiners.

6. That the Committee for Resettlement of Foreign Physicians of the National Refugee Services, Inc., be utilized as a clearing house for information in regard to available emigré physicians for specific placements.

These recommendations are distinctly in line with democratic ideals and principles. Science has no political boundaries. It has been shown abroad that political conflict and economic stress can sadly pervert science to the service of ignoble aims. As the threat of war draws nearer to our country let us avoid the development of prejudice and persecution of those who seek asylum here. The open door should be maintained by the medical profession for those who are qualified.

CELEBRATING THE FOURTH

Statistics for the nation on deaths and injuries reported directly due to the celebration of the Fourth of July with fireworks and other explosives show thirteen deaths in 1939 as compared with eighteen in 1938 and twenty in 1937. Likewise in 1939 there were: 5,305 recorded injuries from burns and lacerations, nineteen cases of loss of vision in one or both eyes; 158 other eye injuries; forty-one instances of loss of finger, hand or other member and thirty-seven other serious injuries, all caused through the use of fireworks or firearms.

In 1939 Pennsylvania reported only eighty-five injuries as contrasting with 1,702 the previous year, a very striking example of the results of the new law barring fireworks.

In principal cities, Kansas City reported 243 injuries in 1939 as compare to 226 reported in the city of Chicago and 258 in Los Angeles in the same year.

The national report which was published in the January 6, 1940, issue of the *Journal of the American Medical Association* shows the following 1939 figures for Kansas: fifty-nine cases of burns and lacerations; one case of loss of finger; one case of loss physician's offices or in hospitals for which no reports were submitted.

States having legislation restricting the sale and use of fireworks have demonstrated conclusively such legislation can provide satisfactory enforcement. It is our hope that Kansas, also, will soon join the ranks of states with laws of this kind.

CRYMOTHERAPY

The use of physical agents in the treatment of malignant growths dates to the discovery of radium and the roentgen ray. After nearly two decades of carefully controlled experimentation and observations, these two finally were deemed effective in the control of cancer. Now a third has been added in the form of crymotherapy, more commonly known as human refrigeration. It has been widely commented upon in the lay press but the wording of some of the articles which have appeared may have given the impression that a "cancer cure" has been discovered.

This is far from the fact and no one is more emphatic about it than Fay¹ who investigated the effect of refrigeration on cancer for eight years. Thus far he states that the only conclusions he can draw from the work are that this form of treatment gives prompt relief of pain and removes the necessity of administering narcotics. There is no evidence as yet at hand to indicate that refrigeration is curative.

There are many problems which this work will present. One of them is how to obtain a low enough temperature in the growth without producing damage in the other organs of the body. It is known that a temperature of 60 F. will result in a progressive destruction of some types of tumors. The lowest, however, that the body as a whole can possibly stand for any length of time is somewhere between 70 F. and 75 F. Whether the present regimen of three to six periods of refrigeration lasting in duration from three to four days each will be changed, remains for the future research in this field to answer.

Physicians are bound to be queried by their patients concerning this new therapy for cancer and they must be prepared to give information that will set aright the garbled or misleading accounts which they may have read or been told about. The work is too important to be spoiled by undue publicity before much more is learned about it. (*New York State Journal of Medicine*—May 15, 1940.)

1. Fay, T.: *Quart. Review* (Jan.) 1940.

TUBERCULOSIS CONTROL

TUBERCULOSIS IN ADOLESCENTS*

Henry D. Chadwick, M.D.,

Helen W. Evarts

The case fatality rate of pulmonary tuberculosis cannot be determined unless we follow a large number of cases from the time diagnoses are made until the death of all the individuals concerned. Unlike acute communicable diseases, tuberculosis is

* Treatment of Pulmonary Tuberculosis in Adolescents, Henry D. Chadwick, M.D. and Helen W. Evarts, *Amer. Rev. of Tuber.*, Vol. XLI, No. 3, Mar., 1940.—From Tuberculosis Abstracts, June, 1940.

a disease of long duration. It may be acute, but is more often chronic, with periods of quiescence followed by exacerbations and may so continue for years.

We may, however, measure the effect of treatment by checking against each other, groups of similar age who have been treated by different methods for the same length of time. The authors studied the records of 245 cases who had parenchymatous pulmonary tuberculosis at the time they came under observation. Most of them received treatment in some sanatorium. These were divided into three groups according to the time they had been under observation, namely, Group A, from five to ten years; Group B, from three to five years; Group C, less than three years.

The type of treatment received by these groups, further divided according to stage of disease, was found to vary during the past ten years. There was a trend away from routine bed-rest treatment for a preliminary try-out period to be later supplemented by pneumothorax if the disease were not controlled. The present practice is to institute pneumothorax promptly. The minimal cases of Group A admitted to Middlesex County Sanatorium (prior to 1934) received no immediate treatment with pneumothorax; forty per cent of Group B were given pneumothorax promptly; of Group C, eighty-seven per cent were given pneumothorax soon after admission.

The conclusion of the authors, based on their own studies and supported by those of others, are that the mortality from tuberculosis in adolescents is high and treatment very discouraging. Morgan, reporting in 1938 on 320 cases of boys and girls ten to eighteen years of age treated in the sanatorium prior to 1933, found that sixty-two per cent were dead, fourteen per cent under treatment, seventeen per cent well, and seven per cent not located. The treatment in this series consisted of prolonged bed-rest supplemented by pneumothorax in a few cases, and then given only after a period of waiting. Zacks recently studied 186 cases treated in sanatoria and observed for a period of about four years. Those that had routine sanatorium treatment only, showed a mortality of 30.9 per cent for boys and 34.4 per cent for girls; those that had sanatorium treatment plus pneumothorax, showed a mortality of 8.5 per cent for the boys and 23.1 per cent for the girls. In the authors' group observed for five to ten years, the deaths were 4.8 per cent for the boys and 27.5 per cent for the girls. Half of these cases were given pneumothorax.

Pneumothorax should be instituted as soon as possible after diagnosis is made even in the mini-

mal cases and this should be supplemented by pneumonolysis if satisfactory collapse is prevented by adhesions that can be cut. Ineffective pneumothorax should be abandoned and some other surgical collapse procedure carried out. When a satisfactory collapse with pneumothorax is obtained, it should be continued for a minimum of three years and for five years in the cavity cases.

Patients discharged from the sanatoria should be considered as having completed only the first phase of treatment and should return at frequent intervals for consultation during subsequent years. If they are pneumothorax cases, they will have their refills and in any event their condition will be rechecked. A roentgenogram taken every three months will be the most important means of following the course of the disease. If the old lesion shows reactivation, or a new one appears, prompt readmission and suitable treatment should be instituted at once.

The evidence available in this and other studies indicates the ineffectiveness of bed-rest treatment alone in staying the progress of tuberculosis in adolescents.

OFFICIAL PROCEEDINGS

FIRST REGULAR SESSION OF THE HOUSE OF DELEGATES

A meeting of the House of Delegates was held at the Hotel Allis in Wichita on Tuesday, May 14, commencing at 9:00 p.m.

Dr. C. C. Nesselrode, President, presided, and called the meeting to order.

Upon a motion made by Dr. J. F. Hassig, Kansas City, the reading of the last minutes, the roll call of delegates, and the report of the Committee on Credentials were waived.

Dr. Nesselrode explained the plan of registering delegates and the methods of voting which would be utilized in this year's sessions of the House of Delegates. He also explained that all officers and committee reports, with the exception of the Treasurer's report, had been previously forwarded to a Reference Committee on Reports of Officers and Councilors, and a Reference Committee on Reports of Committees and Resolutions for study and consideration, and that the House of Delegates would, therefore, hear the reports and recommendations of these reference committees rather than the original reports.

Dr. Philip W. Morgan, Emporia, Chairman of the Reference Committee on the Reports of Officers and

Councilors then presented the following report which had been prepared by that committee:

TO: THE HOUSE OF DELEGATES
COUNCILORS' REPORTS*

In the first district the State and County dues are paid for by money received from diphtheria immunization.

Morris County, in the fourth district, plans to organize a society of its own.

In several districts joint meetings of all the component societies of the district were held during the last year.

Definite effort is being made in varilous districts to improve the political standing of the profession. This shows more co-operation with the program suggested by the State Society.

The Farm Secuity Administration Program is being tried in certain districts with some districts being satisfied and others dissatisfied, depending on the type of contracts in force.

SECRETARY'S REPORT*

Despite the remarkable and ever increasing efficiency of the Executive Secretary many situations are cited where a physician as Constitutional Secretary should be retained.

Since the Constitutional Secretary has important duties and privileges, the present Constitutional Secretary suggested in his report that the incumbent should never succeed himself in office.

REPORT OF THE DEFENSE BOARD*

There have been six cases handled during the preceding year, only three of which were filed during 1939, and some of those have already been disposed of.

It is well for the members to keep in mind that we can only defend physicians who are bonafide members of The Kansas Medical Society with all dues paid. A general comment from the Defense Board, we are sure, would include the reiteration of the fact that if in our contact with patients we would remember to treat the other physician as we would like ourselves to be treated under similar circumstances, there would be little opportunity for misunderstandings, and it would lessen the occurrence of mal-practice proceedings.

EXECUTIVE SECRETARY'S REPORT

The report of Mr. Clarence G. Munns, Executive Secretary, was so condensed that we recommend he read it in its entirety, with the exception that he omit his recapitulation of the work of the Committees since that report will be made through the Reference Committee on Committee Reports and Resolutions.

THE EDITORIAL BOARD†

The financial statement for the Journal showing all income and expenses from May 1, 1939, to and including the April, 1940, issue reflects the following condition:

The surplus of \$301.15 shown for the past year may be compared with the surplus of \$297.79 as shown for the year of 1938-1939. Likewise the balance on hand of \$1,421.82 may be compared with the balance of \$1,245.27 of a year ago.

The Journal pays for its own stationery, supplies and stamps, the salary of its full time employee, the publishing and mailing of the Journal, and an attempt is made in every way to see that the publication is maintained on a self-supporting basis.

The Board is giving consideration to placement of Journal exchange periodicals and review books, so

that an adequate medical library will be at the disposal of all physicians throughout the state.

The Editorial Board believes that Kansas members can and should prepare a larger number of scientific papers, not only for the Journal but for other medical publications.

Respectfully submitted,
REFERENCE COMMITTEE ON REPORTS OF
OFFICERS AND COUNCILORS

Dr. Philip W. Morgan, Emporia, Chairman

Dr. G. M. Edmonds, Horton.

Dr. E. O. King, Herington

Dr. R. G. Klein, Dodge City

Dr. James G. Stewart, Topeka

* * * *

The report of the Reference Committee on Reports of Officers and Councilors was presented for adoption by sections. All sections and recommendations in the report were adopted with the exception of the recommendation made by the Constitutional Secretary that he not succeed himself which recommendation was specifically non-adopted.

In accordance with the instructions contained in the report of the reference committee Clarence G. Munns, Executive Secretary, presented his annual report.

Upon a motion made by Dr. Morgan, and carried, the report of the Reference Committee on Reports of Officers and Councilors was then adopted as a whole with the above exception.

Dr. John M. Porter, Concordia, Chairman of the Reference Committee on Reports of Committees and Resolutions, then presented the following report which had been prepared by that committee:

TO: THE HOUSE OF DELEGATES
THE COMMITTEE ON ALLIED GROUPS*

The committee reports some progress in clarifying the position of lay technicians and nurses in regard to radiology and the giving of anesthetics. They have given approval to the speech training course conducted at Wichita University as distinct from therapeutic treatment in this field. They also took up the matter of payment for x-ray services under the Crippled Children's Commission, and have urged that such payments be made in the future.

THE COMMITTEE ON AUTOMOBILE ACCIDENTS†

The committee advises publicity efforts aimed at bringing to the public attention what bearing physical deficiencies have in automobile accidents. They believe this should be done in the name of the county or State Society. They are still waiting to appear before the Safety Section of the Highway Patrol. Invitation to do so has been promised, but so far is not forthcoming.

THE COMMITTEE ON AUXILIARY*

The committee reports that three things have been accomplished by the auxiliary as follows:

1. Through the auxiliary, doctors have appeared for meetings and discussions before various women's organizations in the state.

2. Speakers bureaus have been established in the auxiliaries for lay organizations.

3. They report the largest membership in the history of the Auxiliary and the formation of one new unit.

THE COMMITTEE ON THE CONTROL OF TUBERCULOSIS*

The committee reports that they are making satisfactory progress in considering the problems facing the committee; mainly, the question of congestion and crowding at Norton and the consideration of silicosis and tuberculosis in the tri-state area.

THE COMMITTEE ON THE CONSERVATION OF EYE SIGHT*

The committee is co-operating with the State Board of Social Welfare, Division of the Blind, and will continue to issue educational leaflets in this connection; and is attempting, through the pages of the Journal, to promote a greater interest in the investigative phases of eye, ear, nose and throat work. Tentative plans have been made for post-graduate courses along this line. The committee has been usually active and has met several times as a whole besides working in sub-committees.

THE COMMITTEE ON PHARMACY*

The committee, according to its report, has been comparatively inactive. However, they recommend the following for consideration; before the next session of the legislature:

1. Legislation regarding the barbiturate problem, which should be comprehensive if considered at all.
2. Revision of the Kansas Pure Food and Drug Laws to conform with the Federal statutes.

THE COMMITTEE ON ENDOWMENT*

The committee reports considerable work in numerous and rather extensive projects, but has nothing on which action should be taken at present. The committee wants to repeat its request that every member of the Society keep in mind the University of Kansas Endowment Fund for the furtherance of medical research or medical studies; and that co-operation with the committee, or Dean Olin Templin of the University of Kansas, is urged in order to meet the necessary legal requirements.

THE COMMITTEE ON HOSPITAL SURVEY†

The committee reports a complete survey of hospitals in the state including those operated by cultists. They recommend continuation of this, which is the only complete listing in Kansas and also advise a study of hospital equipment available throughout the state. They suggest a continued study of the various group hospital plans in operation in the state, without recommendations at present.

They wish to bring to attention at this time, the Wagner-George Bill now pending in Congress. It is proposed in that measure to construct needed hospitals in certain areas of the country and to provide additions and other facilities in established hospitals. If the bill is passed, Kansas will obviously participate in the program. It seems advisable that each county medical society should familiarize itself with the provisions of this measure.

THE COMMITTEE ON THE CONTROL OF CANCER*

The committee reports as usual, a very extensive statewide program.

1. The Women's Field Army of the American Society for the Control of Cancer co-operated in a very large measure with many successful meetings.
2. The committee concentrated this year on skin and

mouth cancer, and reports from the State Board of Health indicate a lowering mortality in skin and mouth cancers, which may be attributed in part, they believe, to better education of the public. In future years, other types of malignancy will be considered. They report that loan packets, colored slides and films, as well as speakers, are being sent, when requested, to any group throughout the state and there has been a large demand for these. Speakers and activities are subject to the approval of the local medical societies in all cases.

3. The usual post-graduate courses have been continued and have reached six different localities.

4. The brochure planned by Dr. C. C. Nesselrode's committee will be available soon and is to be distributed to physicians throughout the state.

5. Dr. C. A. Hellwig, of Wichita, has been appointed editor of the cancer section of the Journal and has already contributed articles of value.

6. A survey has been made of cancer quackery throughout the state.

7. A survey has also been made of the equipment for the therapy of cancer.

THE COMMITTEE ON MATERNAL WELFARE*

The committee has been active throughout the year, and has requested, from the State Board of Health, a method whereby Wassermann tests can be required on every pregnant woman. The sub-committee on graduate courses in obstetrics has been active, as usual, and has furnished the usual number of courses.

THE COMMITTEE ON MEDICAL HISTORY

The committee reports nothing of importance to be considered by the house of delegates.

THE COMMITTEE ON MEDICAL SCHOOLS†

The committee reports constant progress and improvement of the medical school extension facilities, special emphasis on research, and a new library of medical history. They recommend assistance from the membership in securing (a) a pre-clinical building at Lawrence to replace the scattered facilities in use at the present (b) a dormitory at Rosedale, (c) a continuation of the Editorial Board policy of sending books and journals to the medical school. They report rejection of twenty-four qualified students in the past year because of lack of facilities; the committee's approval of the handling of indigent cases in the Out Patient Department in Kansas City; progress in graduate work; and 130 men registered at the four-day clinics. A detailed report from the Dean of the Medical School is appended giving statistics on enrollment, finances, physical plant, research, hospital data, and graduate activities.

THE COMMITTEE ON THE STORMONT MEDICAL LIBRARY†

This committee has done considerable work toward improving the facilities at the state library in Topeka, and is considering, with the Editor of the Journal, and the Committee on Medical Schools, the disposal of exchange journals and books received by the Editorial Board. Final disposal of this matter has been left to the Editorial Board.

THE COMMITTEE ON THE STUDY OF HEART DISEASE*

The committee has had a very active year including a very well received graduate course on cardiology and electrocardiography, lasting five days, and paid for by individual fees, an innovation for the state. A repetition of

this course is planned. The committee is working on the collection of data on the types of heart disease in Kansas through thirty physicians in the state, and hopes to present data of value at an early date.

THE COMMITTEE ON THE CONTROL OF VENEREAL DISEASE*

The committee reports three postgraduate courses, selecting as far as possible, new localities for the meetings; the establishment of four new venereal disease clinics, and better co-operation in the reporting of syphilis throughout the state.

THE COMMITTEE ON SCIENTIFIC WORK*

The committee reports a much enlarged program under the suggestions of Dr. C. C. Nesselrode consisting of (1) action in co-operation with the program committee of the Sedgwick County Medical Society in securing submission of papers by members of the state society from which the local speakers for the present meeting were chosen. (2) Some attempt has been made to promote and correlate work in post-graduate courses throughout the state. More can be done in the future with the various committees and groups co-operating. (3) Plans have been made for the dissemination of new information through the Journal. (4) Excellent co-operation has been secured from the State Board of Health in regard to public health projects. Consideration in the future should be given to the supervision of commercial exhibits by this committee in order to avoid future embarrassment.

THE COMMITTEE ON PUBLIC HEALTH AND EDUCATION†

The committee is working, by means of co-operation with the State Board of Health, on the possibility of establishing a department, trained in publicity work. So far final approval has not been made.

Respectfully submitted,

REFERENCE COMMITTEE ON REPORTS OF COMMITTEES AND RESOLUTIONS

Dr. John M. Porter, Concordia, Chairman
Dr. K. F. Bascom, Manhattan
Dr. H. L. Chambers, Lawrence
Dr. F. F. Foncannon, Emporia
Dr. R. R. Melton, Marion

The above report of the Reference Committee on Reports of Committees and Resolutions was presented for adoption by sections. All sections and recommendations in the report were approved for adoption with the exception of the recommendation contained in the report of the Committee on Medical Schools pertaining to the placement of Journal review books and exchange periodicals. A motion on that matter was presented by Dr. Henry N. Tihen of Wichita, and carried, which provided that the matter of placement of exchange journals and periodicals should be referred to the Council for settlement after the Editor of the Journal, the Chairman of the Committee on Medical Schools, and the Chairman of the Committee on Stormont Medical Library have conferred and prepared recommendations on that subject.

Dr. Porter then recommended that the report of the Committee on Constitution and Rules should

be read and explained to the House of Delegates by Dr. A. W. Fegtly, Wichita, Chairman of the committee. Dr. Fegtly then presented the report of his committee* which was adopted for further consideration at the Thursday meeting of the House of Delegates as is provided in the Constitution and By-Laws of the Society.

Dr. Porter then recommended that the Committee on Medical Economics report should be read to the House of Delegates by Dr. F. L. Loveland, Topeka, Chairman of the committee. Dr. Loveland then presented the report of his committee which was adopted.†

Dr. Porter then recommended that the Committee on Public Policy report should be read to the House of Delegates by Dr. E. C. Duncan, Fredonia, Chairman of the committee. Dr. Duncan then presented the report of his committee which was adopted.

Upon a motion made by Dr. Porter, and carried, the report of the Reference Committee on Committee Reports and Resolutions was then adopted as a whole with the exception of the recommendation of the Committee on Medical Schools, pertaining to Journal review books and exchange periodicals which as above described was acted upon by a separate motion.

Dr. John L. Lattimore, Topeka, then requested permission to introduce by title a resolution pertaining to the Kansas State Board of Health Laboratory which he desired to present in detail at the Thursday meeting of the House of Delegates. Upon approval by Dr. Nesselrode, the subject matter of the resolution was explained, and Dr. Lattimore was granted leave to further present the matter at the Thursday session.

Dr. Geo. M. Gray, Kansas City, then presented the annual report of the Treasurer. Dr. Gray also presented an oral recommendation that he not be re-elected to succeed himself. Upon a motion made by Dr. H. L. Snyder, Winfield, and carried, the report of the Treasurer was adopted and approved with the exception of the above oral recommendation which was specifically non-approved.

Adjournment followed.

* Complete report published in April issue of Journal.

† Complete report published in May issue of Journal.

SECOND REGULAR SESSION HOUSE OF DELEGATES

A meeting of the House of Delegates was held at the Hotel Allis in Wichita on Thursday, May 16, commencing at 8:30 a.m.

Dr. A. W. Fegtly, Wichita, Chairman of the Committee on Constitution and Rules presented

for further consideration the following suggested amendments to the Constitution and By-Laws which were submitted at the Tuesday evening session of the House of Delegates:

Amendment No. 1. An amendment to By-Laws, Chapter IX—Defense Board—Section 2:

"Defense assistance shall be available only to members of this Society; only in claims or suits alleging malpractice based on professional services rendered in the practice of his profession, within the State of Kansas, during the time he was a paid-up member of this Society, and only in claims or suits instituted in the courts of the State of Kansas. There shall be no exception unless recommended by the Defense Board, and approved by the Council."

Following discussion of this amendment a motion was made by Dr. F. C. Taggart, Topeka, and carried, that the sentence reading "**** within the State of Kansas, during the time he was a paid-up member of this Society, and only in claims or suits instituted in the courts of the State of Kansas" be deleted from the amendment and that the following sentence be substituted therefor: "**** within the State of Kansas or adjoining states, during the time he was a paid-up member of this Society, and only in claims or suits instituted in the courts of the State of Kansas, and/or adjoining states."

A motion was made by Dr. W. P. Callahan, Wichita, and carried, that the sentence reading, "There shall be no exception unless recommended by the Defense Board, and approved by the Council" be deleted, and that the following sentence be substituted therefor: "There shall be no exception unless recommended by the Defense Board."

The amendment to the By-Laws, Chapter IX—Defense Board—Section 2, as finally adopted therefore, read as follows:

"Defense Assistance shall be available only to members of this Society; only in claims or suits alleging malpractice based on professional services rendered in the practice of his profession, within the State of Kansas or adjoining states, during the time he was a paid-up member of this Society, and only in claims or suits instituted in the courts of the State of Kansas, and/or adjoining states. There shall be no exception unless recommended by the Defense Board."

Amendment No. 2. An amendment to By-Laws, Chapter IX—Defense Board—Section 6:

"Disbursements for defense shall be annually estimated in advance by the Defense Board as based upon average expenses of the preceding two years. The computed amount shall then be included in the annual budget of the Executive Secretary for presentation to and approval by the House of Delegates. Bills for defense expenditure, authorized by the Defense Board, and approved by the Chairman, shall be paid by vouchers signed by the Treasurer, and countersigned by the President and Secretary, and charged against

the Defense Fund for that year. In the event an insufficient sum is budgeted, the Treasurer shall be empowered to provide, upon a sufficient accounting, an extra sum not to exceed \$300.00, and if additional amounts are necessary authorization shall be secured therefor from the Council. Any surplus at the end of the fiscal year shall be considered in the defense budget for the succeeding year."

Upon a motion by Dr. Feghtly, and carried, the amendment was adopted.

Amendment No. 3. An amendment to By-Laws, Chapter X—Editorial Board—Section 7:

"Funds of the Journal and other publications shall be accounted in separate ledgers, and shall preferably be maintained in separate banking institutions. Bills for expenditures authorized by the Editorial Board and approved by the Chairman of the Board shall be paid by vouchers signed by the Treasurer and countersigned by the President and Secretary. Surplus funds may be accrued at the end of the fiscal year to reserve accounts within limits established by the House of Delegates or the Council."

Upon a motion by Dr. Feghtly, and carried, the amendment was adopted.

Amendment No. 4. An amendment by By-Laws, Chapter VII—Duties of Officers—Section 6:

"The Treasurer shall be the custodian of all monies, securities and valuable papers of this Society; and shall deposit them in safe banking institutions, or invest them, subject to the direction of the Council. He shall be bonded at the expense of this Society in such amount as the House of Delegates may require. He shall pay all authorized obligations of this Society by vouchers which shall be countersigned by the President and Secretary. ****"

Upon a motion by Dr. Feghtly, and carried, the amendment was adopted.

Amendment No. 5. An amendment to By-Laws, Chapter II—Assessments:

"The amount of the annual assessment of this Society shall be not more than fifteen dollars per member, the exact amount to be determined by the Council after consideration of the annual budget for the ensuing year and to be announced to the various component societies not less than three months before the beginning of each fiscal year. Such assessment shall be levied against and paid by the component societies in the manner provided by this Constitution and By-Laws, except that any new member to this State Society being accepted by a component society after July 1, shall be assessed one-half the sum decided upon by the Council, and shall be accorded all rights and benefits of this Society, including defense, until the succeeding January 1."

A motion was made by Dr. M. Truehart, Sterling, and carried, that the amount of fifteen dollars specified in the above amendment be increased to twenty-five dollars. The amendment as finally adopted, therefore, read as follows:

"The amount of the annual assessment of this Society shall be not more than twenty-five dollars per

member, the exact amount to be determined by the Council after consideration of the annual budget for the ensuing year and to be announced to the various component societies not less than three months before the beginning of each fiscal year. Such assessment shall be levied against and paid by the component societies in the manner provided by this Constitution and By-Laws, except that any new member to this State Society being accepted by a component society after July 1, shall be assessed one-half the sum decided upon by the Council, and shall be accorded all rights and benefits of this Society, including defense, until the succeeding January 1."

Following a discussion of dues a motion was made by Dr. H. L. Snyder, Winfield, and carried, that the House of Delegates recommend to the Council that the annual assessment for 1941 shall be at least \$15.00 per member.

Amendment No. 6. An amendment to By-Laws, Chapter XI—Committees—Section 13.

"Section 13 (a). The Committee on Maternal Welfare shall consist of at least five members. It shall be the duty of this committee to secure all available data on the subject of Maternal Welfare, and the field of Obstetrics in general, to disseminate information thereon, and to endeavor to assist the profession in general to improve technique and elevate the standards of this branch of medicine. At least two members of this committee shall have served on the retiring committee.

(b). The Committee on Child Welfare shall consist of at least five members. It shall be the duty of this committee to study and secure all available data on the subject of Child Welfare and the field of pediatrics in general, to disseminate information thereon, and to assist the profession in general to elevate the standards of this branch of medicine. At least two members of this committee shall have served on the retiring committee.

Upon a motion by Dr. Fegtly, and carried, the amendment, was adopted.

An amendment to By-Laws, Chapter XI—Committees—Section 1. The inclusion of the Committee on Maternal Welfare and the Committee on Child Welfare in the list of standing committees and the deletion of the Committee on Maternal and Child Welfare.

Upon a motion by Dr. Fegtly, and carried, the amendment was adopted to substitute the Committee on Maternal Welfare and the Committee on Child Welfare in the list of standing committees of Section 1, Chapter XI, for the Committee on Maternal and Child Welfare.

Amendment No. 7. An amendment to By-Laws, Chapter XII—Component Societies—Section 5:

"Each component society shall judge the qualifications of its own members, but as these societies are the only portals of entrance to this Society and to the American Medical Association, every reputable, ethical and legally registered physician who holds

a degree of Doctor of Medicine from an accredited medical school, shall be privileged to apply for membership. Before a charter is issued to any component society full and ample notice and opportunity to become a member shall be given to every physician in that county who is eligible as herein provided."

Upon a motion by Dr. Fegtly, and carried, the amendment was adopted.

The next order of business was the annual election of officers and councilors.

Dr. C. D. Blake of Hays was elected as President-Elect for 1940-41, and as President for 1941-42; Dr. Henry N. Tihen of Wichita was elected First Vice-President for 1940-41; Dr. John L. Lattimore of Topeka was elected as Second Vice-President for 1940-1941; Dr. John M. Porter of Concordia was re-elected as Constitutional Secretary for 1940-1941; and Dr. Geo. M. Gray of Kansas City was re-elected Treasurer for 1940-1941.

Dr. L. D. Johnson of Chanute was re-elected as Councilor of the Third District for a term of three years; Dr. W. P. Callahan of Wichita was re-elected as Councilor of the Sixth District for a term of three years; Dr. O. A. Hennerich of Hays was elected as Councilor of the Tenth District for a term of three years; and Dr. Geo. O. Speirs of Spearville was re-elected as Councilor of the Twelfth District for a term of three years.

Dr. J. F. Hassig, Kansas City, was elected as Delegate-Elect to the American Medical Association for the years of 1941 and 1942.

A motion was made by Dr. J. F. Gsell of Wichita, and carried, that the Society should defray the necessary and actual expenses of the President, the two delegates, and the Executive Secretary to the 1940 meeting of the American Medical Association.

Dr. J. L. Lattimore of Topeka then presented the resolution pertaining to laboratory services provided by the Kansas State Board of Health, which was read by title at the First Regular Session of the House of Delegates on Tuesday evening. Upon motion made by Dr. Lattimore, and carried, the resolution was approved and adopted:

Upon a motion by Dr. H. L. Snyder, Winfield, and carried, the House of Delegates extended a vote of thanks for the hospitality and the splendid meeting arranged by the Sedgwick County Medical Society for the Eighty-first Annual Session.

Dr. F. L. Loveland of Topeka was then installed as President for 1940-41, and the House of Delegates expressed its appreciation to Dr. C. C. Neselrode for his excellent presidency.

Adjournment followed.

MEETING OF THE COUNCIL

A meeting of the Council was held at the Hotel Allis in Wichita on Thursday, May 16, 1940. Members present were: Dr. F. L. Loveland, Topeka; Dr. C. D. Blake, Hays; Dr. John M. Porter, Concordia; Dr. F. R. Croson, Clay Center; Dr. Geo. O. Speirs, Spearville; Dr. M. Trueheart, Sterling; Dr. G. W. Hammel, Hoxie; Dr. A. C. Armitage, Kinsley; Dr. J. W. Randell, Marysville; Dr. W. P. Callahan, Wichita; Dr. L. S. Nelson, Salina; Dr. Henry N. Tihen, Wichita; Dr. J. L. Lattimore, Topeka; Dr. Geo. M. Gray, Kansas City; Dr. O. W. Davidson, Kansas City, and Dr. L. D. Johnson, Chanute.

The first order of business was the election of one member to the Defense Board for a term of three years. Upon a motion made by Dr. Trueheart, and carried, Dr. Loveland was authorized to appoint this member after consultation with the Defense Board.

The next order of business was the election of a member to the Editorial Board for a term of three years. Upon a motion by Dr. Nelson, and carried, Dr. Lucius E. Eckles of Topeka was re-elected to that position.

Upon a motion made by Dr. Speirs, and carried, it was agreed that the invitation of the Shawnee County Medical Society should be accepted to hold the Eighty-second Annual Session of the Society in Topeka.

Upon a motion made by Dr. Nelson, and carried, Shawnee County Medical Society was authorized to select a day in May, 1941 for the Eighty-second Annual Session with the suggestion that the date be as early in May as possible.

Upon a motion made by Dr. Johnson, and carried, the Editorial Board was authorized to approve expenditures from the Journal fund for any travel expense it deems necessary or advisable during 1940-41.

Upon a motion made by Dr. Porter, and carried, a permanent instruction was issued to the central office to remove the names of unpaid members from the mailing list as of June 1, each year.

Dr. Nelson then reported several matters pertaining to the activities of the Defense Board and upon which no action was taken.

Upon a motion by Dr. Johnson, and carried, a suggestion was made that Dr. Loveland appoint a sub-committee of the Council to investigate the present plans and possibilities pertaining to the hospital bequest in the Jacob Achenbach will of Barber County.

Upon a motion made by Dr. Callahan, and carried, the Council approved the plan of holding an annual secretaries conference at a convenient time and place each year, and authorized the provision

by the Society of necessary expenses in that regard. Dr. Porter was authorized to appoint a committee to supervise arrangements for the 1940-41 conference.

Upon a motion made by Dr. Nelson, and carried, the dues of the Society were established at \$15.00 for 1941-1942.

Adjournment followed.

RETROPERITONEAL CYST SIMULATING
APPENDICITIS

(Continued from Page 261)

incising the peritoneum on the lateral side of the cecum for twenty centimeters, the cyst was removed intact. No vessels large enough to require ligation were attached to it. The cyst weighed 1,482 grams, and measured 24 by 14 by 8.5 centimeters. It contained clear colorless fluid. In sections of the wall viewed through the microscope a single layer of columnar epithelium was present.

The incision in the peritoneum was sutured, restoring the ascending colon to its normal position. The abdomen was closed without drainage. Convalescence was uneventful. When examined on February 10, 1939, the patient stated that she had been entirely free from the attacks of pain that she had formerly suffered.

NEWS NOTES

Dr. J. L. Lattimore of Topeka was elected President-elect of the American Society of Clinical Pathologists at the annual meeting of that group, held in New York on June 6-10, 1940.

INDIGENT CARE

As was reported in the last issue of the Journal the Kansas State Board of Social Welfare forwarded an important bulletin on indigent medical care to the County Boards of Social Welfare and the County Welfare Directors on May 11. A copy of that bulletin and one issued by the Society Committee on Medical Economics on June 4 are published below:

State Department of Social Welfare,
801 Harrison,
Topeka, Kansas.

Chr. L-92.
May 10, 1940

To: County Boards of Social Welfare,
County Directors of Social Welfare.

Pursuant to requests from numerous counties, we are forwarding you some material relative to various types of medical plans in operation in different counties.

We believe that such material may be of assistance to you in your endeavor to handle the problem of indigent medical care in your county.

Sincerely yours,
Frank E. Milligan,
Chairman.

INDIGENT MEDICAL CARE

No subject of social welfare is of greater humanitarian or economic interest than the indigent medical care. Unlike many others, the interest in the indigent medical problem is uniformly manifested throughout the entire state.

The neglect to provide proper or adequate indigent medical care will ultimately produce one unwholesome result, namely, the accumulation of a sizeable number of physically incapacitated persons who will need be supported at much greater expense than would be necessary to provide proper medical treatment at the time the need therefore arises and which in a number of instances eliminate possibility of a continuing need.

The fact that the providing of adequate indigent medical care in the several counties is a local problem, is realized. It is the earnest desire of the State Department to give to the counties, the benefit of suggestions deemed worthy of consideration. It is the further desire to render all assistance possible to the counties in the handling of this problem and to assume wholehearted co-operation relative thereto.

After giving the matter due consideration and with a definite knowledge of the experiences of various Kansas counties with numerous plans, the State Department believes the type of plan to be most satisfactory which will provide:

1. A possibility for the County Board to estimate, budget and control the expenditures for medical care;
2. The most adequate medical, hospital and drug facilities and professional services;
3. Retaining the traditional physician-patient relationship.
4. To the greatest possible extent a free choice of physicians, by the recipient;
5. Possibility of reimbursement from state and federal funds in sums expended by the counties for indigent medical care, with the minimum amount of bookkeeping and "red-tape" required;
6. Compensation as nearly adequate as possible for physicians, hospitals, pharmacists and others rendering medical service to public assistance recipients.

It is also believed that a type of plan, making possible the co-ordination and organization of the complete medical facilities of a county, affords many important advantages over the county physician or county doctor methods. It is a known fact that maximum and proper services cannot be obtained under a plan where one or several physicians are expected to render all forms of medical care, and where they are expected to provide as much medical care as could be furnished by all the physicians within the county.

In consideration of the above facts and with a desire to assist the counties in the proper or more adequate solution of this problem, the State Department submits the "lump sum payment plan," the

"controlled fee schedule plan," and the "per capita payment variation plan" as being the best. The above mentioned types of plans are briefly defined and illustrated as follows:

LUMP SUM PAYMENT PLAN

A contract is entered into by the County Board of Social Welfare and the County Medical Society wherein the County Medical Society agrees to furnish the indigent medical care of the county, and wherein the County Board agrees to pay to the County Medical Society a monthly fixed sum for such services.

In so far as general assistance recipients are concerned under this plan the county would need to calculate the proportionate amount these recipients represent to the total amount agreed upon by the contract, in order that State reimbursement may be received in such expenditures.

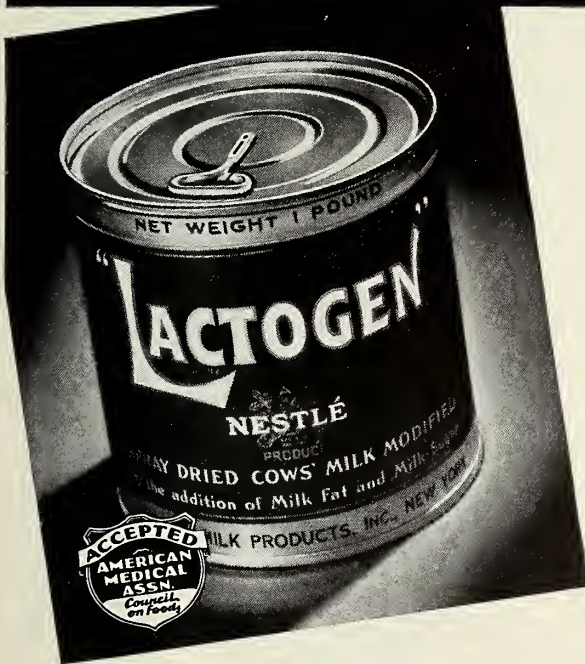
Because of certain Federal regulations and restrictions, a more difficult arrangement must be followed with respect to recipients of categorical assistance, if Federal reimbursement is to be expected. Thus, the remaining proportionate part of the amount agreed upon by the contract should be equally divided among the number of categorical cases who desire to participate in the plan. The amount determined in this manner should then be added to the budget in each case with the intention that voluntary payments of this amount will be made by the recipient to some person or persons designated to receive such payments. Since the proportion of General Assistance and categorical cases in the total case load is constantly varying, a determination of the amount to be budgeted in categorical cases based exactly on that proportion in the current case load would necessitate very frequent changes of the grants, which should be avoided. It is suggested therefore that instead of determining the amount to be prorated among General Assistance and categorical cases respectively on the basis of the current monthly case load, that proportion be determined according to the actual proportions existing in four representative months of summer, fall, winter, and spring in the preceding year. It may be assumed that an average thus reached will offer a fair basis for determining the proportion of cost to be borne by categorical and General Assistance cases, respectively. The amount which the individual categorical case is to be budgeted for medical care should then remain a constant one for a given period (six months or a year or until there is reason for questioning the fairness of the fact) and such variations as may be necessary as the case load changes would not affect the categorical base budgets, but would be absorbed in General Assistance.

Categorical cases not desiring to participate in the plan cannot be compelled to do so. If, however, a case is budgeted for and paid the calculated amount in any one month, but fails to pay it over as above prescribed, said amount need not be budgeted and paid to the recipient in subsequent grants, but may be paid, by the county, direct to the medical society, as in the case of General Assistance recipients, for which payments the county would be eligible for State reimbursement. This would, however, apply only to future payments and the amount budgeted in previous months and not paid over by recipients cannot be deducted from subsequent grants.

When
Mothers' Milk
 is not
 available . . .



USE LACTOGEN



It is universally recognized that the milk from the cow is a very satisfactory and successful substitute for mothers' milk if offered in proper form and proportion. That is why Lactogen is made wholly from fresh cows' milk. Taken from tuberculin-tested herds, the milk used in making Lactogen is completely checked for cleanliness and freshness before acceptance . . . then processed in shining, spoolless stainless steel drying chambers under ideal modern conditions of control and sanitation.

Lactogen is fresh, whole cows' milk, fortified with additional milk fat and milk sugar to match human milk proportions of fat, protein, and carbohydrates.

Lactogen is an easily digestible food. The characteristics of the casein are changed to form fine and flaky curds, and the fat globules are physically broken down.

Lactogen is especially convenient and safe. It may be used even where there is no refrigeration. Its preparation is simple, even for the most inexperienced mother.

No advertising or feeding directions, except to physicians. For free samples and literature, send your professional blank to "Lactogen Department."

NESTLÉ'S MILK PRODUCTS, INC.

155 EAST 44TH ST., NEW YORK, N. Y.

CONTROLLED FEE SCHEDULE PLAN

Under this type of plan a contract is entered into between the County Board of Social Welfare and the County Medical Society wherein it is agreed that payment for indigent medical care will be made on the basis of an agreed upon fee for individual services rendered, and wherein it is also agreed that the total amount to be paid shall not exceed a certain maximum sum monthly.

The success of this plan obviously depends upon the use of a County Medical Society Committee which will proportionate these within the maximum monthly amount.

The expense incurred in providing indigent medical care under this type of plan could be met in one of two ways. First: The average case load may be determined by the same formula as prescribed for the "lump sum payment plan." With a definite determination of the average case load, the cost per case on the basis of the maximum monthly payment could be determined. The categorical cases could be budgeted for their respective proportionate share in the same manner during any one month, when figured on the basis of the agreed upon fee schedules, total less than the contracted monthly maximum the necessary adjustment could be made with a smaller payment in the nature of General Assistance to the Medical Society. Second: By budgeting all categorical cases one month for the actual service rendered to each respective categorical case during the preceding month. By this method a more nearly accurate allowance could be made this manner, variations in case load as well as equitable distribution of expense could be more properly handled. This method does, however, present certain handicaps and possible dangers. It would necessitate more frequent changes in grants. There is also a question as to the advisability of budgeting each month for the preceding month.

PER CAPITA PAYMENT PLAN

This plan closely parallels the "lump sum payment plan," the only major difference being that the contract between the County Board of Social Welfare and the County Medical Society provides that the County Medical Society shall be compensated on the basis of an agreed upon monthly sum per person or case included in the plan rather than upon an agreed monthly sum for all services rendered to all indigent persons.

The payments made in providing indigent medical care under this type of plan can be handled similar to those in the "lump sum payment plan."

SUGGESTIONS

In addition to the brief illustrations given above relative to the enclosed plans, it is advisable to mention some of the important factors pertinent to such plans.

1. *Distribution of Funds.*—The County Medical Society would be privileged to apportion the amount of money received, as per contract in any of the above plans, among participating physicians in any manner it desired. All contracts should provide that the County Medical Society would at the end of each month, render the County Welfare Office an accounting of all services rendered, including the date, name of patient and nature of service.

2. *Amount of Compensation.*—In any of the above

plans the County Boards and the County Medical Societies should, in all instances, retain the right to establish the amount to be paid for indigent medical care in a particular county.

3. *Participation Forms.*—To foster and properly administer any of the plans, it is felt that the present necessity for executing county purchase order forms by the counties for each individual expenditure should be eliminated. That said form as the same is now used would be executed by the county for the total monthly payment to the Medical Society and that the county would be eligible for participation on the basis of the form executed for this expenditure. The accomplishment of this possibility would eliminate, to a material extent, some of the present costs incurred by the county in the investigations made pursuant to requests for medical attention. It would also eliminate a considerable amount of bookkeeping and accounting procedure and considerable "red-tape."

4. *Variations in Plans.*—It is obviously true that counties will frequently desire to and need to make variations in the plans. It is also possible that the counties would desire a combination of the plans submitted herein.

5. *Federal and State Participation.*—Care should be exercised by the County Welfare Departments, prior to placing into operation any type of plan, to ascertain that the greatest possible amount of Federal and state participations in the expenses incurred therein, will be obtainable. Before reimbursement is made by the State Department on any of the plans described herein they must have the approval of the State Department of Social Welfare. Such approval should be procured before a plan is placed into operation.

In order that Federal reimbursement may be properly anticipated, participation in the plan by recipients of categorical grants can be voluntary only and the case record should contain documentary evidence, perhaps in the form of a statement voluntarily signed by the recipient, that he wishes to participate in the plan. It should be mentioned, also, that payments to be made by recipients should never be collected by the County Welfare Office in any manner. Such payments should be made in all instances to the person or persons designated by the contracting parties for the purpose of receiving the same. If a recipient does not wish to participate and a need for medical care arises, that need must be met.

6. *Hospitalization and Drugs.*—In a number of instances it will be impossible to have one contract on one plan which will provide all indigent medical care, hospitalization and drugs. This fact will be particularly true in counties which are without hospital facilities. It is sincerely hoped, however, that in all instances possible indigent medical care, hospitalization and drugs will be handled in some satisfactory manner.

We trust that the above suggestions for handling the problems of providing adequate indigent medical care will be thoroughly considered by you and that the same will prove of valuable assistance."

TO: PRESIDENTS, SECRETARIES, OFFICIAL REPRESENTATIVES.
SUBJECT: INDIGENT MEDICAL CARE.

We have enclosed for your information a copy of an important bulletin on indigent medical care which

WE BOAST A LITTLE

about Kansas HEALTH

Among the tasks with which this commission is charged is the shouting from house-tops of Kansas' favorable aspects. So fair and bountiful is our state that we have much to boast about . . . and one of the items we mention often is Kansas health.

In longevity, Kansas ranks among the first three states for women and among the first six states for men. Kansas Board of Health records show that the battle against disease is being won in our state by modern medical science and education.

We congratulate the medical profession of Kansas, and the workers in the field of preventive medicine, for their accomplishments in this field . . . for their able cooperation with the naturally healthful climate of our state . . . with such outstanding results that we can boast about Kansas health.



**THE KANSAS
INDUSTRIAL DEVELOPMENT
COMMISSION**

STATE HOUSE TOPEKA

the Kansas State Department of Social Welfare forwarded to all counties on May 10.

As you will note, the bulletin contains a comprehensive discussion of several types of indigent medical plans, and a description of certain new procedures which have been made available and which should prove to be of material assistance in the establishment and operation of county medical society indigent plans.

If we may do so, we would like to suggest that the physicians in each county immediately appoint a committee to study the bulletin, to consider ways in which the procedures outlined therein can be utilized in their county, and to commence discussion of possibilities in that regard with their county commissioners and county welfare director.

Several comments on the bulletin, in which your members or your committee might be interested, are as follows:

I.—STATE FINANCIAL PARTICIPATION

The bulletin outlines a procedure, which, if adopted and followed, may enable your county welfare department to obtain a larger amount of state and federal financial assistance for indigent medical care than has heretofore been received. It also authorizes a change in procedure which should greatly simplify the present accounting requirements incidental to obtaining state financial participation in county medical society indigent plans. This is particularly true with respect to general assistance clients, wherein the necessity for executing individual "purchase orders" for medical care has been eliminated, and wherein it will hereafter be possible to receive state financial participation on the basis of payments made directly to county medical societies.

Hence, if your county now has a county medical society plan, it is possible that these features and several other suggestions included in the bulletin may furnish an opportunity for improving the plan and for increasing the compensation received. If your county does not now have an indigent plan, it is equally possible that these suggestions and available procedures will provide an incentive for adoption of a plan of that kind.

II.—FEDERAL FINANCIAL PARTICIPATION

It was hoped that the Federal Social Security Board would find it possible to authorize the handling of Federal financial participation for the medical care of Social Security Act clients in a similar manner as has been provided by the state for general assistance clients. If that result could be obtained, Kansas would have a particularly ideal and efficient medical program, inasmuch as medical budgeting of all kinds could be eliminated, and as maximum state and Federal participation could be easily computed and provided. County medical societies could thereby receive direct payment for all indigent medical services, and expenditures for indigent medical care could be centralized, better supervised, and much more efficiently made. Despite numerous efforts which have been made in that direction, it has, to date, been impossible to obtain the necessary permission for that procedure, by reason of a Federal ruling which requires that Federal participation cannot be provided unless payments furnished to clients are unrestricted, unconditional and directly made. Hence, although nego-

tiations are to be continued in this regard, it is necessary at the present time for the more difficult method hereinafter outlined to be followed, insofar as Social Security clients are concerned.

III.—A SUGGESTED PROGRAM

That each county medical society attempt to obtain an agreement with its County Board of Social Welfare, which will include the following provisions:

1. An arrangement wherein the county medical society may be compensated on a "lump sum," "per capita," or "controlled fee schedule" basis for the medical care of general assistance and similar clients.
2. An arrangement wherein the county will guarantee payment of an agreed upon amount to the county medical society, for the provision of medical care to Social Security Act clients; wherein the county will budget and pay to each Social Security Act client, who desires to participate in the plan, a designated amount each month; wherein suitable sources will be established as depositories, in which Social Security Act clients may deposit to the credit of the county medical society the amounts they receive for medical care; wherein the depositories may certify on a medical card or other receipt that particular persons are participants in the plan for particular months; and wherein the amount received by the county medical society each month from the various depositories would be deducted from, or credited to, the total amount guaranteed by the county for the provision of medical care to Social Security Act clients.

Although it is realized that the plan above outlined for Social Security Act clients contains some difficulties, it is probably the best procedure in this regard which can be provided at the present time. It is believed, however, that the method is worthwhile, for the reason that a substantial amount of additional financial aid is made possible. For example, if a county is willing to expend \$5,000.00 net per year in county funds for indigent medical care, a sufficient amount of reimbursement could be obtained through ideal state and Federal financial participation to enable a total expenditure of from \$12,000.00 to \$15,000.00 per year.

The part of the suggested program described in the paragraph pertaining to Social Security Act clients may obviously be omitted, if such is desired. To do so, would merely require that the county medical society be compensated for "indigent medical care," on the basis of the total amount the county is willing to spend. Under this modification the thirty per cent state participation could be obtained on the entire amount the county spends, but all Federal participation would thereby be waived. Utilizing the same example cited above, an amount of \$5,000.00 net in county funds would, with maximum state reimbursement, be increased to \$6,500.00 under this method. In other words, counties which have satisfactory county medical society plans at the present time, and which do not receive state financial participation and which do not desire to substantially alter those methods, may find it possible to obtain state participation by merely adding the necessary provisions to make that feature possible, but they cannot obtain the more substantial amount through Federal participation, unless they desire to complete arrangements for the above suggested method or a similar method for Social Security Act clients.



Research must look both ways

Sound research needs Janus-like ability to see in two directions at once—backward for experience—forward for opportunities. Parke, Davis & Company looks *back* on seventy years of research activity—*forward* to new and greater achievement.

The introduction of chemical and physiologic standardization—Adrenalin and Pituitrin—the separation of Pitocin and Pitressin—Mapharsen, Meningococcus Antitoxin—these are a few of the contributions from the Parke-Davis Research Laboratories. Each represents an important chapter in our research experience.

This record must continue; our program points toward tomorrow. Research facilities are constantly being enlarged, activities broadened. Our goal is well defined—to contribute to future medical progress.

PARKE, DAVIS & COMPANY



PIONEERS IN RESEARCH ON MEDICINAL PRODUCTS

IV.—COUNTIES WITHOUT COUNTY MEDICAL SOCIETIES

It is believed that the Kansas State Board of Social Welfare will approve, for financial participation, plans submitted by counties which do not have county medical societies, if such plans afford free choice of a majority of the doctors of medicine in those counties. Arrangements of this kind, as is true of all plans, in which state participation is anticipated, would require approval by the Board.

V.—HOSPITALIZATION AND DRUGS

As will be noted, the plans herein described pertain mainly to medical and surgical services and do not include specific provisions for hospitalization, drugs and appliances. The Kansas State Board of Social Welfare is studying possibilities in this connection, and hopes to be able to provide information on these subjects in the future. In the meantime, local arrangements will need to be made for these services. It is probable, however, that financial participation can be obtained for plans of this kind approved by the Board.

VI.—PRESENT PROGRAMS

It is believed that the definitions of "lump sum," "per capita" and "controlled fee schedule" plans contained in the bulletin afford sufficient latitude to include all present types of county medical society plans. However, if any errors or difficulties have been occasioned on this subject, it is probable that suitable provision can be made.

VII.—ASSISTANCE

If any of the explanations contained herein are not clear, or if the suggestions outlined do not meet the needs of any counties, or if there is any other assistance which can be given, this committee will be glad to attempt to furnish further information or to aid in all ways possible.

* * * *

The committee greatly appreciates the excellent assistance and co-operation it has received from the Kansas State Board of Social Welfare. It feels the Board has accomplished all that is possible at the present time toward making available efficient and workable indigent medical care plans in this state. It also believes that further experience coupled with further progress on this subject will provide a way wherein Kansas can solve one of the most important problems of public health and medical care.

COMMITTEE ON MEDICAL ECONOMICS
The Kansas Medical Society."

OSTEOPATHS OPINION

The Kansas Supreme Court handed down the following opinion pertaining to *Gafney vs. Wilson County Hospital* case on May 28.

OPINION ON MOTIONS OF LITIGANTS

Per Curian.

In the original proceeding in mandamus, the plaintiff's petition was subjected to a motion to make definite and certain in various particulars. That motion was sustained and the amendment to plaintiff's petition was filed.

Defendant has filed a motion to strike certain portions of plaintiff's amended pleading.

Plaintiff has countered with a motion to overrule defendant's motion to strike, and to require defendant to answer forthwith.

Plaintiff also seeks the appointment of a commissioner to take evidence on the question of what constituted osteopathy "as taught and practiced in legally incorporated colleges of good repute" prior to and during the year 1913 when the statute governing the practice was enacted. (Laws 1913, Chapter 290.)

Touching the last point first the court would observe that it will be sufficient time to consider the appointment of a commissioner when proper issues of fact and of law have been joined, if the services of a commissioner will be advisable. That, however, does not yet appear.

The court holds that this lawsuit must be restricted to matters in actual controversy between the plaintiff and the Wilson County Hospital, that the wide range of issues which the litigants were permitted to cover in *State, ex rel., V. Gleason*, (148 Kan. 1, 79 P. (Ed.) 911), where the burden and expense of the litigation was of comparatively small concern to the litigants, and their partisans, would be intolerable if permitted to fall on one small hospital supported by the taxpayers of a single county.

The motion of defendant to strike parts of plaintiff's petition is sustained to this extent: Paragraphs B and D of plaintiff's amended petition do not state a specific cause of action nor do they tender an issue which can properly be litigated between the parties to this action, and these paragraphs are declared stricken.

Defendants are given fifteen days to plead to the remainder of plaintiff's petition.

As will be noted, the opinion strikes all complaints from the osteopaths' petition except an allegation pertaining to a major surgical case and one pertaining to an obstetrical case. Both of these complaints were based upon an alleged refusal to permit certain types of treatment in specific instances. The remaining complaints, stricken from the petition were based upon hypothetical possibilities and examples.

COMMITTEES

A meeting of the Committee on Control of Cancer was held in Topeka on June 5 in conjunction with the annual meeting of the Executive Committee of the Kansas Women's Field Army. A meeting of the Committee on Conservation of Eye Sight will be held in Topeka on June 27th and a meeting of Committee on Child Welfare will be held in the near future. The minutes of these meetings will appear in the Journal in the near future.

PRIZES

The following are the winners of prizes at the annual golf and trap shooting tournaments held in conjunction with the 81st Annual Session:

GOLF

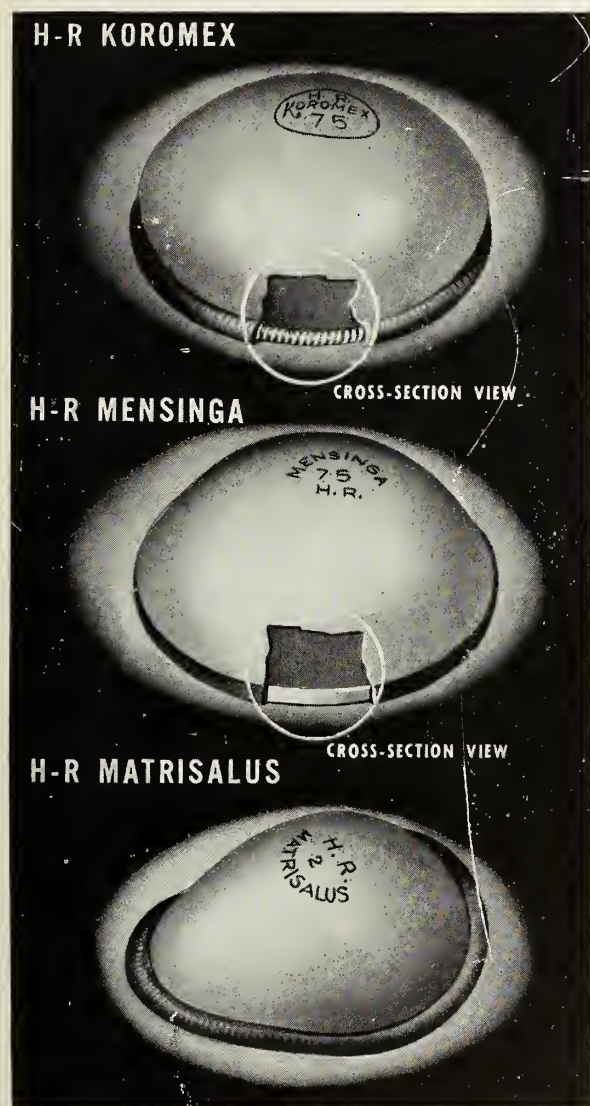
Dr. H. P. Jones, Lawrence—Nordstrum Trophy.

Dr. E. S. Edgerton, Wichita—Quinton-Duffen Trophy, Quinton-Duffen Optical Company.

Dr. B. P. Meeker, Wichita—Mead Johnson Trophy, Mead Johnson.

Dr. D. E. Eggleston, Kingman—Winfield Academy of Medicine Trophy, Winfield Academy of Medicine.

Diaphragms for EVERY Condition



HOLLAND-RANTOS offers a most complete line of diaphragms. We invite inquiries concerning specific conditions.

• • •

The *H-R Koromex* diaphragm (coil spring type) is available in sizes from No. 50 to No. 105 mm., and is indicated for use in all normal anatomies.

The *H-R Mensinga* diaphragm (watch or flat spring) is available in sizes from No. 50 to No. 90 mm. including half sizes, and is indicated where there is a slight redundancy of the mucosa of the retro pubic space, or a slight relaxation of the anterior vaginal wall.

The *H-R Matrisalus* diaphragm is available in sizes—No. 1 to No. 6 corresponding to 65, 70, 75, 80, 85 and 90 mm. This special shaped diaphragm is indicated in cases of cystocele or prolapse where, owing to relaxed vaginal walls, the ordinary diaphragm cannot be retained in position.

Send for copy of "Physician's Diaphragm Chart
and Fitting Technique"

HOLLAND-RANTOS CO., Inc.

551 FIFTH AVE. - NEW YORK
308 W. WASHINGTON ST. - CHICAGO
520 WEST 7TH ST. - LOS ANGELES

Dr. H. T. Morris, Topeka—Pratt County Trophy, Pratt County Medical Society.

Dr. G. G. Whitley, Douglass, Saline County Trophy, Saline County Medical Society.

Dr. V. L. Pauley, Wichita—R. J. Cabeen Memorial Trophy, Butler-Greenwood County Medical Society.

Dr. C. T. Moran, Arkansas City—Reno County Trophy (Golf Bag), Reno County Medical Society.

Dr. R. G. Klein, Dodge City—Diagnostic Protein Outfit, Arlington Chemical Co.

Dr. G. G. Whitley, Douglass—Willsonite Goggles, Barnett & Ramel.

Dr. V. L. Pauley, Wichita—Hematological Case, Bard-Parker Co., Inc.

Dr. D. A. Swenson, Abilene—Ampoule Case, George A. Breon & Co., Inc.

Dr. W. K. Hobart, Topeka—Hypodermic Case, Burroughs Wellcome & Co.

Dr. L. S. Roberts, Wichita—Ampoule Case, Ciba Pharmaceutical Products.

Dr. E. M. Sutton, Salina—two Pkgs. Kit Suture Assortment, Davis & Geck Sales Co.

Dr. C. R. Burkhead—five-pound can Cocomalt, R. B. Davis Sales Co.

Dr. J. L. Wentworth, Arkansas City—six golf balls, Dunlop Tire & Rubber Co.

Dr. A. L. Ashmore, Wichita—Leather Golf Bag, C. B. Fleet Co.

Dr. J. L. Lattimore, Topeka—Heinz Food Box, H. J. Heinz Co.

Dr. L. E. Joslin, Harper—Set H-R Fitting Rings, Holland-Rantos Co., Inc.

Dr. C. L. White, Ellinwood—two dozen flask pkgs. Horlick's Malted Milk Lunch Tablets, Horlick's Malted Milk Corp.

Dr. H. T. Morris, Topeka—Men's Toilet Set, W. E. Isle Co.

Dr. W. G. Rinehart, Pittsburg—Auto Kit, Johnson & Johnson.

Dr. D. E. Eggleston, Kingman—"Cause and Prevention of Disease" by Perkins, Lea & Febiger, Publishers.

Dr. D. P. Trimble, Emporia—One-year Subscription to "Digest of Treatment," J. B. Lippincott Co.

Dr. J. W. Shaw, Wichita—Cocker Spaniel Pup, Lobica Incorporated.

Dr. H. F. Hyndman, Wichita—Men's & Women's Gift Sets, Luzier's, Inc.

Dr. H. E. Friesen, Wichita—Golf Jacket, M & R Dietetic Laboratories.

Dr. N. L. Rainey, Wichita—One dozen golf balls, Meadow Gold Dairy.

Dr. W. J. Kiser, Wichita—two cartons Philip Morris Humidorpacs, Philip Morris Co.

Dr. J. V. Van Cleve, Wichita—Hypodermic Tablet Case, Sharp & Dohme.

Dr. R. J. Miller, Topeka—Insufflator Kit, John Wyeth & Brother.

Dr. M. W. Hall, Wichita—Approach Iron, Zemmer Company.

Dr. H. W. Palmer, Wichita—Estrogenic Hormones, Reed & Carnrick.

Dr. C. E. Chipps, Wichita—250 Vita-Kaps, Abbott Laboratories.

Dr. L. E. Knapp, Wichita—Pharmaceuticals, Cole Chemical Co.

Dr. R. A. West, Wichita—Formo-Quinocaine, Farnsworth Laboratories.

Dr. Howard C. Clark, Wichita—Plestrin in Oil, Harrower Laboratory.

Dr. H. P. Jones, Lawrence—Scales, Kansas Medical Society.

Dr. E. S. Edgerton, Wichita—Lamp, Kansas Medical Society.

Dr. B. P. Meeker, Wichita—Guest Book, Kansas Medical Society.

Dr. Don Kendall, Great Bend—Food Warmer, Kansas Medical Society.

Dr. E. C. Rainey, Wichita—Camera, Kansas Medical Society.

Dr. H. A. West, Yates Center—Electric Clock, Kansas Medical Society.

Dr. F. L. Menehan, Wichita—Guest Book, Kansas Medical Society.

SKEET

Dr. F. L. Loveland, Topeka—Mead Johnson Trophy (Skeet).

Dr. E. E. Tippin, Wichita—Pistol Trophy—KMS.

Dr. E. A. Smiley, Junction City—KMS Rifle Trophy.

Dr. H. E. Haskins, Kingman—Saline County Trophy (Skeet).

Dr. W. A. Smiley, Junction City—100 Trop Trophy—KMS.

Dr. T. S. Finney, Wichita—50 Trap Trophy—KMS.

Dr. F. L. Loveland, Topeka—\$10.00 Credit, A. S. Aloe Company.

Dr. G. B. Morrison, Wichita—Toric Polaroid Goggles, American Optical Co.

Dr. E. A. Smiley, Junction City—Gould's Medical Dictionary, Blakiston Co., Inc.

Dr. G. L. Thorpe, Wichita—Ampoule Case, Ciba Pharmaceutical Products.

Dr. E. L. Vermillion, Salina—two packages Kit Suture Assortment, Davis & Geck, Inc.

Dr. Howard Snyder, Winfield—Winbreaker, Denver Chemical Corp.

Dr. T. S. Finney, Wichita—Winbreaker, Denver Chemical Corp.

Dr. J. E. Chipps, Wichita—Acorplane Splint, DePuy Mfg. Co.

Dr. P. B. Young, Wichita—Atomizer, DeVilbiss Company.

Dr. M. R. Blacker, Wichita—Nivea Creme and Skin Oil, Duke Laboratories, Inc.

Dr. C. B. Bell, Pittsburg—Triple-Change Stethoscope, Hoffman-La Roche, Inc.

Dr. H. T. Davidson, Wichita—one dozen flask packages Horlick's Malted Milk Lunch Tablets, Horlick's Malted Milk Corp.

Dr. W. A. Smiley, Junction City—Leather Toilet Kit, Mennen Company.

Dr. R. R. Sheldon, Salina—one carton Philip Morris Humidorpacs, Philip Morris & Co., Ltd.

Dr. E. A. Evans, Conway Springs—Medical Wall Set, Russell & Company.

Dr. H. O. Williams, Cheney, Men's Gift Set, Frederick Stearns & Co.

Dr. H. E. Haskins, Kingman—Squibb "Book of Health," E. R. Squibb & Sons.

Dr. C. D. Blake, Hays—Physician's Case, Upjohn Company.

Dr. W. G. Gillette, Wichita—Gallon Thermos Jug, Kansas Medical Society.

Dr. J. W. Shaw, Wichita—Electric Timer, General Electric X-ray Corporation.

Dr. Marion Trueheart, Sterling—Wood Hostess Set, Kansas Medical Society.

Dr. J. W. Cheney, Wichita—Poker Rack & Chips, Kansas Medical Society.



Hotel Jayhawk

TOPEKA ~ KANSAS

Main Dining Rooms and Coffee Shop

Air Conditioned and Refrigerated

Many Private Dining Rooms Available for Special Parties

THE MOSBY HOTEL CO.

N. M. Mosby, Pres. & Gen. Mgr.

SILVER PICRATE

Wyeth

HAS SHOWN A CONVINCING RECORD* OF
EFFECTIVENESS IN ACUTE ANTERIOR URETHRITIS

due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
Monilia albicans

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

***Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

Alcohol — Morphine — Barbitol

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the A.M.A.

Dr. E. E. Tippin, Wichita—Electric Clock, Kansas Medical Society.

Dr. O. C. McCandless, Wichita—Smoking Stand, Kansas Medical Society.

The prizes donated by the following companies were distributed to participants who did not win a prize in the competition:

GOLF

One dozen golf balls—Wm. S. Merrell Co.

One dozen golf balls—Emerson Drug Co.

One dozen golf balls—Goetze Niemer Co.

One dozen golf balls—Gerber Products Co.

Three dozen tubes Ovol—Armour Laboratories.

One dozen bottles Auralgan—Doho Chemical Corporation.

DUES

In accordance with the ruling of the Council the names of all members whose current dues are unpaid will be removed from the Society and Journal mailing lists as of June 1.

It is requested that all members who have neglected to forward their remittance do so immediately.

NEW SUPERINTENDENT

The Kansas State Board of Social Welfare recently announced that Dr. Thomas L. Foster has been appointed as superintendent of the Osawatimie State Hospital effective June 1.

Dr. Foster has been assistant superintendent of the Larned State Hospital for the past eight years, and is a graduate of Columbia University College of Physicians and Surgeons at New York in 1929.

Dr. Ralph Fellows, the former superintendent of the Osawatimie Hospital, resigned on May 30 to become superintendent of the Milwaukee County Hospital for Mental Diseases, in Milwaukee, Wisconsin.

NORTH CAROLINA PUBLISHES A JOURNAL

The latest publication to enter the field of publishers of state medical Journals is the Journal of the North Carolina Medical Society. Dr. T. W. M. Long of Roanoke Rapids is the secretary and business manager and Dr. Wingate M. Johnson of Winston-Salem is the editor. The Kansas Medical Society extends congratulations to the North Carolina Medical Society in its new venture.

NARCOTIC PERMITS

Every physician registered under the Harrison Narcotic Act or under the Marihuana Tax Act, or under both, must register on or before July 1, 1940, with the collector

of internal revenue of the district in which he maintains an office. Failure to reregister by that time adds a penalty of twenty-five per cent to the tax payable at time of registration and makes the defaulting physician liable to a fine not exceeding \$2,000 or to imprisonment for not exceeding five years, or both.

HEALTH

All members are urged to read the advertisement of the Kansas Industrial Development Commission published on page 265 of this issue of the Journal.

In these days of vast amounts of inaccurate propaganda on the subject of public health it is indeed reassuring to find sources which appreciate the fact that morbidity and mortality have almost without exception shown a consistent favorable improvement throughout the depression. That, in fact, there has been even a more rapid improvement during the past ten depression years than in the preceding ten years or in any other period.

MEMBERS

Dr. A. L. Ashmore of Wichita presented a paper entitled "Diagnosis of Chest Diseases" before the Tri-County Medical Society in Ponca City, Oklahoma, on February 15.

Dr. Benjamin G. Dyer, formerly a member of the staff of the Santa Fe Hospital, has opened an office in Topeka, and will specialize in eye, ear, nose and throat.

Dr. W. G. Gillett and Dr. E. M. Seydell of Wichita were the speakers at a meeting of the Garfield Medical Society in Enid, Oklahoma, on February 29. Dr. Gillett spoke on "Visual Pathways" and Dr. Seydell spoke on "Mastoiditis."

Dr. Arthur Gray of Topeka spoke on "Diagnostic Problems in Urology" at a meeting of the Kansas City Urological Society held in Kansas City, Missouri, on May 2.

Dr. Louis G. Graves of St. John has opened an office in Macksville, where he will practice several days each week in addition to his practice in St. John.

Dr. Arthur E. Hertzler of Halstead was a guest speaker at the state meeting of the Iowa State Medical Society on May 1 in Des Moines. Dr. Hertzler spoke on "Principles of Peritoneal Drainage."

Dr. Willard D. Holt of Wichita has moved to Altus, Oklahoma, where he has opened an office.

Dr. M. W. Husband of Manhattan, Dr. Galen M. Tice of Kansas City, Kansas, and Dr. David T. Loy of Manhattan, were the co-authors of an article entitled "Efficiency of an Intermediate Dilution of Tuberculin (P.P.D.) in Determining Tuberculosis Infection Rate," which was published in the March, 1940, issue of the Journal-Lancet.



PRESCRIBE OR DISPENSE ZEMMER

Pharmaceuticals . . . Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled. Write for General Price List

Chemists to the Medical Profession

KA 6-40

THE ZEMMER COMPANY, Oakland Station, PITTSBURGH, PA.

COPIOUS DIURESIS

after
INTRAMUSCULAR
or

Intravenous Administration



SALYRGAN-THEOPHYLLINE effects prompt and copious diuresis with virtually no local discomfort after intramuscular injection and with lessened risk of thrombosis after intravenous administration. It has been conclusively demonstrated that this diuretic combination is absorbed quickly and completely from the tissues when injected intramuscularly, and that it is satisfactorily tolerated by the punctured venous wall.

The greatest field of usefulness of Salyrgan-Theophylline is in edema of congestive heart failure, cardiorenal disease and nephrosis. The total amount of diuresis which follows the individual injections is ordinarily so large that a comparatively short course of treatment renders patients edema free. Reaccumulation of fluid can usually be controlled by an occasional administration of Salyrgan-Theophylline in combination with other appropriate measures (digitalis, diet, rest, etc.).

Salyrgan-Theophylline is injected *intramuscularly* (buttocks, legs or arms) or *intravenously* (never subcutaneously).

Write for booklet which discusses the essential details, including contraindications and side effects.

SALYRGAN - THEOPHYLLINE

"Salyrgan," Trademark Reg. U. S. Pat. Off. & Canada

(Mercury salicylallylamide-o-acetate of sodium with theophylline)

HOW SUPPLIED

Salyrgan - Theophylline solution (containing 10% Salyrgan and 5% theophylline) is supplied in ampules of 1 cc., boxes of 5 and 25; and in ampules of 2 cc., boxes of 10 and 25.



Brand of MERSALYL
with
Theophylline



WINTHROP CHEMICAL COMPANY, INC.

Pharmaceuticals of merit for the physician

NEW YORK, N. Y.

WINDSOR, ONT.

Dr. R. M. Isenberger of Kansas City was recently elected as president of the Kansas City Academy of Medicine.

Dr. F. J. McEwen has returned to Wichita after spending two weeks in post graduate work at the University of Michigan at Ann Arbor.

Dr. H. W. Palmer of Wichita is the author of an article entitled "A Case of Acute Idiopathic Hematoporphyria with Acute Ascending Paralysis" which was published in the February issue of the *Annals of Internal Medicine*.

Dr. C. C. Price, formerly of Little River, has moved to Lyons.

Dr. Charles Rombold and Dr. H. O. Anderson both of Wichita were speakers at the Central District Physical Education Association meeting which was held in Wichita on March 28-29. Dr. Rombold spoke on "Mechanics of the Feet" and Dr. Anderson spoke on "Therapeutic Trends in Physical Education."

Dr. E. M. Seydell of Wichita presented a paper entitled "Inductive or Myalgic Headache" before the American Laryngological Society in Rye, New York, on May 26, and a paper entitled "Germinal Center of the Sternum Mistake for a Foreign Body in the Esophagus" at the American Bronchoscopic Society in New York on June 5.

Dr. Arnold I. Webman, formerly a member of the staff of the Topeka State Hospital, is now associated with Dr. C. G. McMahon at Superior, Nebraska.

COUNTY SOCIETIES

The Brown County Medical Society held a dinner meeting on May 3 in Horton, with wives of the members as guests. Dr. J. W. Randell of Marysville was the speaker. His subject was "Tetanus."

The Cloud County Medical met on March 14 at Concordia. Dr. V. L. Scott of Wichita spoke on "Focal Infection" and Dr. C. A. Hellwig of Wichita spoke on "Pyloric Stenosis."

The members of the Labette County Medical Society were the dinner guests of the Katy Hospital in Parsons on April 17. Out of town guests were: Drs. L. D. Johnson, A. M. Garton, and L. L. Roberts of Chanute.

The Miami County Medical Society held a meeting on May 8. Dr. Hjalmar E. Carlson of Kansas City, Missouri, spoke on "Diagnostic Problems of Urology."

The Montgomery County Medical Society held a meeting on February 23 in Coffeyville. Dr. V. L. Pauley of Wichita spoke on "Prostatectomies and Transurethral Resections."

The Pratt County Medical Society held a meeting on March 22 in Pratt. Guest speakers were: Dr. Orvall R. Withers of Kansas City, Missouri, who spoke on "Clinical Aspects of Allergy," and Dr. Graham Asher of Kansas City, Missouri, who spoke on "Common Causes of Anginal Pain."

The Sedgwick County Medical Society held a meeting in Wichita on April 16. Dr. Raymond A. Schwegler

REPRINT PRICE LIST

Reprints from articles in the KANSAS MEDICAL JOURNAL

**All Reprints are made the same size as
Journal pages, 7 $\frac{3}{4}$ x 10 $\frac{1}{2}$ inches.
Transportation charges on reprints are
to be paid by the Author**

No. Copies	Pages	Without Cover	With Cover
100.....	4	\$ 9.00	\$12.25
250.....	4	9.75	14.50
500.....	4	11.00	17.50
1000.....	4	18.00	26.00

No. Copies	Pages	Without Cover	With Cover
100.....	8	\$12.50	\$16.00
250.....	8	14.00	18.00
500.....	8	16.00	23.00
1000.....	8	21.00	32.00

No. Copies	Pages	Without Cover	With Cover
100.....	12	\$16.00	\$20.50
250.....	12	18.25	23.50
500.....	12	21.25	28.25
1000.....	12	28.00	39.00

CAPPER PRINTING CO.

**Capper Building,
TOPEKA, KANSAS**

A genuine desire to serve you
well makes it pleasant and con-
venient to patronize—

QUINTON - DUFFENS OPTICAL COMPANY

Your Local Independent Wholesaler

TOPEKA

HUTCHINSON

SALINA

86c out of each \$1.00 gross income
used for members benefit

Physicians Casualty Association
Physicians Health Association



**HOSPITAL
ACCIDENT
SICKNESS
INSURANCE**



For ethical practitioners exclusively
(50,000 POLICIES IN FORCE)

Liberal Hospital Expense Coverage for \$10.00 Per Year

\$5,000.00 accidental death	For
\$25.00 weekly indemnity, health and accident	\$33.00 per year

\$10,000.00 accidental death	For
\$50.00 weekly indemnity, health and accident	\$66.00 per year

\$15,000.00 accidental death	For
\$75.00 weekly indemnity, health and accident	\$99.00 per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

\$9,000,000 PAID FOR CLAIMS

\$200,000 deposited with State of Nebraska for
protection of our members.

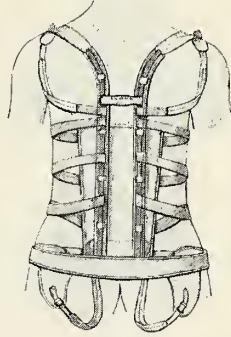
Disability need not be incurred in line of duty—benefits
from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

BACK BRACE

For correction of faulty posture,
severe sacro-iliac strain, and convales-
cent treatment of fracture of spine.



P. W. HANICKE MFG. CO.

**1013 McGee Street
KANSAS CITY, MO.**

Tel. Victor 4750



OAKWOOD SANITARIUM

The beauty and quietness of the environment of Oakwood Sanitarium cannot be over emphasized. This makes the Institution ideal not only for nervous and mental patients but for convalescents and rest cures as well. Alcoholics and drug addicts are accepted.

Illustrated Booklet and Rates on Request

OAKWOOD SANITARIUM
Tulsa, Oklahoma, Route 6

NED R. SMITH, M.D.
Resident Medical Director

of Lawrence spoke on "Problems of Abortion" and Dr. Willard W. Hall of Wichita spoke on "Clamp Operation for Hysterectomy." The April 2 meeting of the association was in the form of a symposium on Medical Economics.

The May meeting of the Shawnee County Medical Society was conducted as a discussion forum on Carcinoma of the Stomach. Drs. F. C. Taggart, A K Owen and W. M. Mills discussed the subject from the angles of the internist, the roentgenologist, and the surgeon.

The Sumner County Medical Society met on March 21 in Wellington. Dr. Allen Olson, of Wichita, spoke on "Allergy in Relation to General Practice."

The Wyandotte County Medical Society held a meeting on May 21 in Kansas City. Dr. H. W. King of Kansas City spoke on "Acute Cholecystitis and Anomalities of Bile Passages." Dr. J. H. Luke of Kansas City, Kansas, spoke on "Chemo Therapy." The papers were discussed by Dr. C. C. Nesselrode and Dr. W. H. Algie of Kansas City.

DEATH NOTICES

Dr. Joseph G. Walker, 64 years of age, died May 5 at his home in Wichita of a heart attack. Dr. Walker was graduated from the University of Nebraska School of Medicine in 1903. He had been located in Wichita for the past seven years and formerly had practiced in Eureka. Dr. Walker was a member of the Sedgwick County Medical Society.

THE STOKES HOSPITAL

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Med. Dir.

923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray

Dr. David Thomas Muir, 70 years of age, died May 13, at his home in Alden. Dr. Muir was born in North Branch, New York, on March 24, 1870, and was graduated from the University of Tennessee School of Medicine at Memphis, in 1901. He was a member of the Rice County Medical Society.

ANNOUNCEMENTS

The Michael Reese Hospital, 29th and Ellis Avenue, Chicago, Illinois, announces a full-time intensive course in Electrocardiography, August 19 to 31, 1940, under the supervision of Dr. Louis N. Katz, Director of Cardiovascular Research. The course is an intensive one, offered to the general practitioner with practice on several electrocardiographic machines, and open to both beginning and advanced students in Electrocardiography. The fee for the course will be \$100.00, with reservations made upon receipt of \$10.00 which will be applied on the tuition.

FOR SALE—Office equipment of the late R. D. Fraker, M.D., of Garnett, Kansas. Description and prices on request. Mrs. Lola E. Fraker, Garnett, Kansas.

FOR SALE: A number of X-Ray accessories and parts; some surgical instruments. Send for list. P. O. Box No. 558, Kinsley, Kansas.



THE
W. E. ISLE CO.
1121 Grand Ave.
Kansas City, Mo.

All Types Orthopaedic
Appliances Made
in Our Own Factory
PROMPT SERVICE
CAPABLE FITTERS

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago
Phone Randolph 8855

The Journal Of THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

JULY, 1940

Number 7

EPILEPSY*

M. G. Peterman, M.D.

Milwaukee, Wisconsin

Epilepsy is a chronic disease of the central nervous system characterized by periodically recurring convulsions (grand mal or major convulsions), petit mal seizures (minor attacks), lapses, or abnormal mental states occurring in an individual with a personality defect or inherited constitutional inferiority but with no demonstrated pathologic lesion.¹ Gibbs and Lennox define epilepsy as "disordered functioning of the rate-regulating mechanisms of the brain."² My definition is an attempt to include the essential established clinical knowledge of the disease in one sentence.

It is obvious that the disease is a chronic, usually progressive, involvement of the brain which is characterized by at least four different clinical manifestations. The classical grand mal convulsion is well known. A detailed description usually suggests the diagnosis. Many children with grand mal epilepsy, however, do not have an aura and many do not lose control of the sphincters in the early stages of the disease. The petit mal attack or minor seizure may long escape recognition and when it occurs in sleep or in a subclinical form it may be undiagnosable except perhaps by means of the electroencephalogram. Children with petit mal epilepsy usually eventually develop grand mal, but those with grand mal seldom develop petit mal later. Fasting and the ketogenic diet usually control petit mal and grand mal seizures. Phenobarbital is almost a specific for the temporary control of grand mal convulsions, but it has no effect whatever on petit mal in children. I have found no drug which will control petit mal seizures.

The lapses are varying periods of disturbed consciousness during which the individual is incapable of performing functions which require activity of the higher centers. These lapses explain some of the emotional explosions or periods of abnormal behavior in children who act normally at other

times. The psychic equivalents consist of periodically recurring uncontrollable outbursts of violent action which are apparently without cortical control. Gibbs and Lennox have demonstrated distinctly different rhythms or electroencephalographic tracings for grand mal, petit mal, and psychic equivalent attacks, thus substantiating well-known clinical observations.³

The personality defect of the epileptic is also well known. The child is emotional, self-centered and moody. He is usually a constitutional psychopath with exalted ideas. Early in the disease most epileptic children show an average or superior mentality. If they have been free from suppression or over-control, the mental development is often as good or better than that of their siblings. Mental deterioration develops only after the brain has been subjected to repeated convulsions or attacks.

There has been no convincing demonstration of consistent pathologic lesions to explain the cause of idiopathic epilepsy. The lesions described, ie, thickened pia, sub-pial collections of fluid, sclerotic plaques and vessels, etc., are the result of repeated convulsions and not the cause. The reported blood and metabolic chemical changes have not been consistently found or established as causative factors. The only objective evidence of abnormal cerebral function in epilepsy is that recently furnished by the electroencephalogram.³

Idiopathic epilepsy is transmitted through heredity as a mendelian recessive. Thus it may skip several generations and is seldom found in the parents or brothers and sisters of the patient. It is notoriously difficult to persuade the parents to enumerate the relatives with mental disease, insanity, convulsions and epilepsy. When thorough genealogic studies are made these diseases are found in a high percentage of the antecedents. Subclinical or unrecognized epilepsy or nocturnal attacks in relatives may have escaped recognition, potential epileptics may have died before the disease became manifest, or certain information may be hidden in the family closet. Rarely can one obtain a history such as I have reported of a large number of convulsions in several generations.⁴ A negative history means little; a positive history is most informative. An epileptic

*Presented at the 80th Annual Session of The Kansas Medical Society, Topeka, May 4, 1939.

is born with his potential disease. Without this potentiality an individual does not develop epilepsy, with it certain metabolic irregularities must develop before the clinical manifestations appear. The patient is usually eight or ten years of age before the symptoms appear. It is impossible to make a diagnosis of epilepsy on a single convulsion.

Twenty-four per cent of the convulsions in childhood are due to epilepsy. These children must be diagnosed and treated early. The first step in diagnosis is a complete and detailed history of the family and the patient. Next comes a detailed description of the seizures, their frequency, character, time of occurrence, inciting factors, duration, and after-effects. Then comes a study of the child, his emotional pattern and environment. Urinalyses, blood counts, Wasserman tests, blood calcium, phosphorus, sugar determinations, and spinal fluid studies are routine procedures. The customary roentgenograms of the skull are ambiguous. If there is a history of cerebral injury, if there is any suspicion of a cerebral lesion, or if there is a poor response to treatment, an encephalogram is indicated. This major procedure is, of course, not justified unless there is available a competent interpretation of the roentgenograms. Finally, then, the diagnosis of epilepsy is made by the exclusion of any organic pathology.

TREATMENT

The patient must now be kept under control and observation for many years. An inherited constitutional disease cannot be cured, but the patient may be relieved of his symptoms. If the seizures are kept under control, the epileptic child may be encouraged to lead a normal life. His environment must be adapted to provide a quiet but active life free from irritation and annoyance. There must be adequate rest and sleep and a daily evacuation of the bowels. Most epileptic children have fatigue posture and this must be corrected with exercises or, if necessary, a brace. The diet must provide well-selected, well-prepared food at regular intervals. Fried foods, nuts, corn, navy beans, cucumbers, and highly seasoned dishes are not allowed. Nothing should be given between meals except water or fruit juices. The fluid intake is restricted to a minimum. Whenever possible the patient should be placed on a ketogenic diet. When this is not practicable, or if the seizures do recur oftener than twice a month, the restricted diet may be tried, not as a substitute but as a temporary measure.

RESTRICTED DIET

BREAKFAST: Fruit—One ripe banana, one orange, one-half grapefruit, or a serving of prunes, apricots, or apple sauce cooked without sugar.

Eggs—Any form, one or two.

Bread—One or two slices whole wheat one day old. Butter generously.

Cream—Thirty per cent. Six to eight ounces.

DINNER: Meat—One average portion of roast lamb or veal or broiled lamb chop, kidney, liver or sweet breads; poultry (broiled or roasted); codfish, mackerel, salmon, trout, or whitefish (broiled).

Vegetable—One average portion of asparagus, beets, cabbage, carrots, cauliflower, egg plant, spinach or turnips. Season with butter and small amount of salt. One average portion celery, lettuce, or watercress thoroughly minced.

Dessert—Without juice, one average portion apricots, peaches, pears, or rhubarb (stewed or canned without sugar).

Bread—One slice whole wheat one day old. Butter generously.

Cream—Six to eight ounces or buttermilk may be given twice a week.

SUPPER: Meat—Crisp bacon or one egg (any style except fried).

Vegetable—One average portion of asparagus, beets, cabbage, carrots, cauliflower, egg plant, parsnips, spinach, or turnips; and one average portion celery, tomato, lettuce, or watercress. A small amount of vinegar may be used for seasoning.

Dessert—One to three tablespoons of honey, jelly, jam, or preserves.

Bread—One slice of whole wheat. Butter generously.

Cream—Six to eight ounces.

Eat slowly—chew well. Rest before and after meals.

Not over — glassfuls of water a day—taken between meals in small amounts.

Nap every noon.

Bed at — p.m.

The above procedures must be supplemented with phenobarbital. This drug is the most useful therapeutic agent available and has no substitute. The drug is harmless if given under supervision. The reactions are few and easily controlled. I have seen no instances of habit formation or of increased tolerance. The dosage should be divided throughout the twenty-four hours, but one dose should always be given before the expected attack. The dosage should be large enough to control the seizures. When this end is attained, the dosage must be continued for at least one year. In the second year it may be gradually reduced. Phenobarbital should never be discontinued abruptly because status epilepticus may supervene. Status epilepticus is best treated with

chloroform anesthesia or with magnesium sulphate intravenously. A sterile twenty per cent solution is injected slowly in two to twenty c.c. amounts and repeated every four to six hours until the seizures are under control. After any convulsion the patient must be treated as is any patient who has had cerebral trauma, with bed rest, quiet, diet restriction, and regulation of body temperature, for several days. Phenobarbital should be started promptly.

Phenylethyl hydantoin ("Dilantin") has been a disappointment to me. I have used the drug for the past ten months to replace or to reinforce phenobarbital or the ketogenic diet in stubborn cases of convulsions. There have been but two cases in which this drug has been more effective than phenobarbital. "Dilantin" costs three times as much as phenobarbital and the effects are unpredictable. The capsules are difficult to administer to young children.

SUMMARY

Epilepsy is a chronic inherited disease with convulsions or their equivalents as the major symptoms. The disease is a well-known syndrome and not just "one of the convulsive disorders." The onset usually occurs in childhood. Every patient deserves careful study and must be kept under observation for an indefinite period. While the disease cannot be cured, the symptoms may usually be kept under control. When the disease does not respond to adequate treatment, an organic lesion may be suspected. The ketogenic diet and phenobarbital constitute the most effective treatment available for epilepsy.

REFERENCES

1. Peterman, M. G. Treatment of Epilepsy in Childhood. Chapter in Billings-Forscheimer System of Therapeutics, Supplemental Vol. D. Appleton and Company, New York, 1929. Epilepsy in Children. Trans. and Proc. Second Internat. Congress of Pediatrics, Stockholm. (August) 1930. Epilepsy in Childhood. Internat. Clinics, Vol. II, Series 45, 1935.
2. Gibbs, F. A., Gibbs, E. L., and Lennox, W. G. Brain. 60:377. (Dec.) 1937.
3. Gibbs, F. A., Gibbs, E. L., and Lennox, W. G. Arch. of Neurol. and Psych. 39:1. (Feb.) 1938.
4. Peterman, M. G. J. A. M. A. 102:1729. (May 26) 1934.

The lowest infant death rate in the nation's history was recorded in 1939, according to preliminary tabulations made public today by the Census Bureau, Department of Commerce.

The 1939 infant death rate of 48.0 deaths per one thousand live births is based on 108,532 deaths of infants under one year of age. In 1938 there were 116,702 deaths which resulted in a rate of 51.0. The 1937 rate was 54.4 based on a total of 119,931 deaths. The record-breaking mark of 1939 represents the culmination of two decades of general decrease in infant mortality.

Decreases in the infant mortality rate in 1939, compared with the previous year, were reported by forty-two states and the District of Columbia. The rate rose during the same period in six states. Minnesota's rate of 35.4 was the lowest last year. New Mexico, with a rate of 109.3 and Arizona, 95.5, reported the highest rates last year.

MODERN TRENDS IN ANESTHESIA*

Lloyd H. Mousel, M.D.**

Rochester, Minnesota

The improvements which have been made in the field of anesthesia during the last few years have been due largely to improvements in the selection of the proper type of anesthesia for each patient and the skillful administration of the agent or combination of agents. Before anesthesia is considered in detail mention should be made of preoperative sedation.

Adequate preliminary sedation will facilitate the administration and maintenance of inhalation, local, spinal or, intravenous anesthesia. The condition of the patient and the extent of his anxiety always should be considered. The average patient receives a small dose of one of the shorter-acting barbiturates the evening before operation. If the patient is sleepless and restless two hours after receiving the sedative, the dose may be repeated so that he may be assured of a restful night. The next morning an additional small dose of the sedative usually is given so that the patient will continue in a tranquil state before operation. Most patients receive morphine and atropine about half an hour before anesthesia. The fears of the patient will usually be allayed by this regimen and the induction and maintenance of inhalation anesthesia will be facilitated. A patient who is to have his operation under spinal, local or regional anesthesia will usually remain quiet and co-operative.

Although the procedure for preoperative sedation outlined has many advantages it may have its disadvantages. Overdosage of preliminary sedation may cause the patient to become unco-operative, and the depression may become so great that the induction and maintenance of inhalation anesthesia may become difficult or impossible.

Our present methods of premedication may be responsible for some of our postoperative pulmonary complications. Many persons, particularly those who are heavy smokers, those who have recently recovered from respiratory infections, or those who have chronic sinusitis or chronic pulmonary disease, routinely evacuate the accumulation of secretions from their nose, pharynx and tracheobronchial tree each morning on rising from bed. The routine of morning and evening sedation often dulls the reflexes to the extent that most of these persons will

*Read before the meeting of the Leavenworth County Medical Society, Leavenworth, Kansas, April 8, 1940.

**From the Mayo Clinic, Rochester, Minnesota.

not evacuate the secretions from their respiratory passages before operation. Administration of atropine may dry the accumulated secretions sufficiently to make expectoration almost impossible. Each patient, therefore, should be placed in a vertical position and encouraged to evacuate the nasopharynx and tracheobronchial tree as thoroughly as possible before he is taken to the operating table.

Spinal anesthesia continues in favor for certain types of surgical procedures. Procaine or metycaine are probably the most satisfactory agents to be used in spinal anesthesia. This type of anesthesia is particularly advantageous in the repair of ventral, inguinal and femoral hernias, but should not be employed for patients who are markedly anemic, debilitated or dehydrated. Operations on the lower part of the abdomen and on the extremities usually can be done satisfactorily under spinal anesthesia. Small doses of ephedrine or no ephedrine at all may be given at the time the spinal anesthetic is administered. The blood pressure usually can be supported satisfactorily by the intravenous administration of small doses of ephedrine as needed throughout the period of operation. The administration of a high concentration of oxygen often will overcome the nausea and vomiting during spinal anesthesia. However, nausea is distressing to the patient and retching and straining often makes the operation extremely difficult for the surgeon. The combination of spinal anesthesia and the intravenous administration of pentothal sodium usually controls the nausea satisfactorily.

Cyclopropane has been used rather generally throughout the country in the last two or three years. This agent is very potent and when it is used, the induction and maintenance of anesthesia are usually much smoother than when less potent anesthetic agents, such as nitrous oxide, ethylene and ether are used. It has become a great temptation to many to use cyclopropane for all procedures. However, it is a highly explosive agent, and it seems to have some action on the heart which is not understood thoroughly. It has been my practice to limit use of cyclopropane to those cases in which it seems to be definitely indicated. It is valuable when a very high concentration of oxygen is required or a minimal amount of diaphragmatic movement is desired to facilitate the surgical procedure.

Intratracheal anesthesia is useful in many procedures, especially when the Magill type of large soft rubber tube is used. It is not my practice to use intratracheal intubation routinely in general surgical procedures. I reserve the method for use in cases in which a free airway may not be obtained otherwise

and in cases in which extensive surgical procedures are to be carried out about the head or neck.

The results obtained by the use of metycaine in local and regional anesthesia either by block or infiltration methods have been gratifying. This is especially true in sacral block anesthesia.

INTRAVENOUS ANESTHESIA

Intravenous anesthesia continues to be very satisfactory in many types of operations. The most satisfactory drugs which are available for this purpose at present are pentothal sodium (sodium ethyl [1-methyl-butyl] thiobarbituric acid) and evipal sodium (sodium n-methyl-c-c-cyclo-hexanolmethyl barbituric acid). Both are usually effective anesthetics. These agents should always be administered by the fractional method as described by Lundy.² Pentothal seems to be more potent than evipal and produces smoother anesthesia. Excitement and muscular twitchings during the period of recovery are seldom observed after use of pentothal. Pentothal sodium usually should be administered in a concentration of 2.5 per cent. This concentration seems to be relatively nonirritating to the walls of the vessels and the incidence of phlebitis following anesthesia has been reduced so that it has ceased to be a major problem. The irritation produced by extravenous injection of a 2.5 per cent solution of pentothal usually causes only a slight tissue reaction.

The average patient who is to receive pentothal sodium should be prepared for anesthesia in the same way that a patient is prepared before any other general anesthetic agent is to be given. It is imperative that the patient's stomach should be empty. If the agent is going to be used on a patient who has recently partaken of a meal, gastric lavage should be carried out before he is anesthetized. The induction will be smoother and less of the anesthetic agent will be required for maintenance if preliminary medication has been given. The administration of pentothal may require the service of two persons, one to inject the agent and the other one to support the jaw and make sure that the airway is patent.

After the patient is placed on the operating table, a suitable vein is selected for venipuncture. Usually one of the veins of the arm or hand can be used; however, if for some reason the upper extremities cannot be used conveniently, the median malleolar vein in either ankle is usually accessible. Varicose veins of the leg require special care during the injection in order to avoid overdosing the patient, for a large amount of the anesthetic solution may become pooled in the enlarged veins. Movement of the leg may cause a sudden evacuation of the drug

into the circulation. The needle is inserted into the patient's vein and held firmly in the anesthetist's left hand. After inspection of the patient's teeth and mouth has been made to be sure that there is no loose bridge-work or foreign bodies in the mouth, injection of the solution is begun. Five or six cubic centimeters of the solution is injected into the vein and the patient is asked to count. The length of time that the patient is able to count on a given dose serves as a fairly good index of the amount of pentothal that will be required to maintain satisfactory anesthesia. If the patient is still counting after fifteen or twenty seconds, an additional 2 or 3 c.c. of the solution is injected. This procedure is kept up until anesthesia has been established. Care always should be taken that the tourniquet is removed and that there is no tight object around the extremity during the injection. After anesthesia is established the surgeon should be asked to wait for two or three minutes before an incision is made.

During anesthesia the pulse rate and respiration are watched closely. Pentothal anesthesia produces respiratory depression when a sufficient dose to produce deep surgical anesthesia has been given. If an overdose is given and respiratory arrest becomes evident, the anesthetist should administer oxygen by placing the face mask of an anesthesia machine on the patient's face and making rhythmic pressure on the rebreathing bag. Pentothal sodium is detoxified rapidly in the body so that respiration will probably begin within less than a minute. In cases of complete respiratory arrest the administration of oxygen, of course, should be continued until normal respiration is established once more. Under pentothal anesthesia momentary respiratory arrest does not affect the cardiovascular system. Cardiovascular collapse is secondary to the anoxemia of prolonged respiratory arrest and quickly develops if oxygen is not administered. Throughout the operation the anesthetist can judge fairly accurately the depth of anesthesia by watching respiration. The respiratory rate is not decreased materially during anesthesia, but the depth and minute volume are reduced materially.

In operations requiring no muscular relaxation the patient may be allowed to squint his eyes, move slightly or phonate before an additional quantity of the drug is given. The patency of the airway must be maintained throughout anesthesia. If oxygen is not being given through a face mask, it is best to use a small cotton or tissue paper butterfly, taped over the nose and mouth in such a way that it is possible for the anesthetist to watch the movement of the butterfly on inspiration and expiration, for not only is a patent airway necessary, but it is desirable at

all times to know that the airway is being used.

Pentothal sodium anesthesia is favored particularly in cases in which diathermy or cautery is to be used, for the hazard of fire and explosion does not exist. Minor operations in both general and special fields of surgery have been performed with success under intravenous anesthesia. The scope of pentothal sodium anesthesia has been broadening during the last one or two years and it has been found possible to do many major operations under this type of anesthesia. Safety in the longer and more difficult operative procedures has been increased by the administration of oxygen throughout anesthesia with the pentothal sodium. In cases in which an excessive amount of pentothal is being used, the administration of $1/6$ to $1/4$ grain (0.01 to 0.016 gm.) of morphine sulfate intravenously has been found to decrease the subsequent amount of pentothal needed materially. The administration of a fifty per cent concentration of nitrous oxide with oxygen decreases the amount of pentothal needed for long procedures and improves respiration.

The use of intravenous anesthesia has been extended to certain types of operations on the larynx, such as laryngoscopic procedures, in which diathermy is to be used on lesions of the larynx or vocal cords. The patient's throat should be thoroughly cocainized before administration of pentothal is begun. This is important for all procedures in the throat when pentothal is to be used, for the pharyngeal and laryngeal reflexes become hyperactive with this type of anesthesia and it is necessary to stop these reflexes before instrumentation. Pentothal anesthesia facilitates bronchoscopic and esophagoscopic procedures on patients who are highly nervous and apprehensive. In such cases too thorough cocainization of the throat must be carried out prior to administration of the pentothal.¹

This type of anesthesia has proved satisfactory for simple amputations of the breast, the removal of nodules for diagnosis, dilation, curettage, perineorrhaphy, vaginal hysterectomy, and many orthopedic procedures. It is useful in some abdominal procedures, such as appendectomy, on debilitated or aged patients who for some reason must not be given an inhalation or spinal anesthetic. Infiltration of the abdominal wall at the site of incision is advantageous. Pentothal anesthesia is of value when an anesthetic must be given to a patient for the reduction of a fracture under the fluoroscope, for under these circumstances it is necessary to use an agent that is noninflammable and nonexplosive. Pentothal sodium anesthesia is useful for painful dressings, or when large packs are to be removed from wounds, for it is possible to give a sufficient amount of this

drug to produce almost any stage of anesthesia from light analgesia to profound anesthesia.

Pentothal sodium is useful in dental extractions, especially in cases of simple extraction when the patient need be asleep for only a short time. It is necessary, however, to prepare the patient for a general anesthetic before the agent is given. The extraction should be done with the patient supine. It is not recommended that intravenous anesthesia be given in the office for ambulatory patients unless the patient is accompanied by a responsible person, for the patient will be sufficiently ataxic for two or three hours after anesthesia to prevent his being trusted to leave the office alone. At present the anesthesia for office procedures should be local or regional whenever possible. The portability of the equipment needed for the administration of pentothal makes it one of the most practical anesthetic agents that can be used.

REFERENCES

1. Adams, R. C.: Recent advances in anesthesia—1939. *Arch. Surg.* 40: 364-372 (Feb.) 1940.
2. Lundy, J. S.: Balanced anesthesia. *Minnesota Med.* 9:399-404 (July) 1926.

ACUTE OBSTRUCTION OF THE URETER*

Orville R. Clark, M.D.

Topeka, Kansas

Acute obstruction of the ureter is not a particularly common condition, but it does occur often enough to be worthy of more consideration than it receives. In most text-books of surgery it is hardly mentioned, and when it is described it is commonly in some out-of-the-way paragraph, where it is found only after a search. In discussions of the differential diagnosis of acute abdominal conditions it is only occasionally mentioned, and in the current literature there are infrequent references to this condition. Yet it is more commonly seen than some of those conditions which are discussed at length in text-books and in the literature—for example, acute hemorrhagic pancreatitis and mesenteric thrombosis. The importance of acute obstruction of the ureter, or "blocked ureter" as it is commonly called, is increased by the serious end results which follow when the condition is neglected in the acute stages. There is apt to be permanent damage to, or even destruction of the kidney, through the development of a hydronephrosis or even a pyonephrosis.

This condition would seem worthy of considera-

tion then, because of its relative frequency, because of the serious sequelae which follow neglect in the acute stage, and because it has not been given the prominence it would seem to deserve. This paper is a brief consideration of the etiology, symptoms and treatment of "blocked ureter," with a report of nine cases which were seen in a period of about four and one half years.

ETIOLOGY

The most common cause of acute obstruction of the ureter or "blocked ureter" is ureteral calculus. Calculi may be present in the kidney without causing alarming symptoms until their descent in the ureter is started. If such a stone becomes impacted, as a certain percentage will, the condition is changed from ureteral colic to a true obstruction of the ureter. Stones which cause an acute obstruction are usually of a moderate size, being small enough to start down the ureter, and large enough that their progress is arrested before they reach the bladder.

Other common causes of obstruction are blood clots, pus clots, and edema of the ureter secondary to an acute infectious process in the kidney and ureter. All of these cause obstruction most commonly at the uretero-pelvic junction or in the intravesical portion of the ureter—the points of physiological constriction. Rarely an acute obstruction is produced by torsion of the ureter when a kidney is mobile but the ureter is fixed. This is called Dietl's Crisis. The kinking of a ureter over an aberrant vessel to the kidney may occasionally cause an acute obstruction, but it is more likely to be of the chronic type.

SYMPTOMS

The most common symptom of this condition is pain. This is likely to be a constant pain in the flank or lower abdomen, sometimes with radiation toward the genitalia or the inner side of the thigh. It is in contrast to the paroxysmal pain of a moving stone, and if—as occasionally happens—the paroxysmal pain of a colic gives way to a constant pain, the possibility of impaction of the stone with obstruction should be considered. The pain is of a type which may be easily confused with that seen in intra-abdominal conditions, notably acute appendicitis and acute cholecystitis. The pain is usually quite severe, and may be relieved very little by morphine.

The temperature is occasionally normal, but more commonly is moderately elevated, to 101-103 degrees. When there is a temperature elevation, it may be either of a septic (fluctuating) type or a constant high temperature. In those cases where there is an infection superimposed on the ureteral block, the patient is apt to have chills and a rather high

*Read at the Meeting of the Shawnee County Medical Society, Topeka, January 9, 1939.

temperature. In one of the cases reported here the temperature was over 105 degrees.

Nausea and vomiting may be quite prominent, even to the point of sharing the predominant role with the pain, or they may be absent entirely. When present, this feature also may lead one astray in thinking of some intra-abdominal lesion if he is not on his guard.

Anuria (the so-called calculous anuria) may be present if any one of several conditions is fulfilled: A simultaneous block of both ureters; blocking of the ureter of an only remaining kidney; block of the ureter of the good kidney, the other being non-functioning; or block of one ureter, with reflex suppression of the opposite side. In recent years, with the improved means of diagnosis available, this last group has been found to be much less common than was formerly supposed. Anuria is not very common, but its presence should of course suggest the possibility of a complete ureteral obstruction. A decrease in the quantity of urine is quite common in this condition, particularly at the early stage of the obstruction, before the opposite kidney has assumed compensation in the failure of its fellow.

There is usually tenderness and sometimes an associated muscle spasm both in the lower abdomen and in the costo-vertebral angle. If the obstruction has been present for twenty-four hours or more the kidney is likely to be palpably enlarged and quite tender. This is of special significance as a diagnostic point, particularly if the kidney was known not to be enlarged before the onset of the illness.

An additional sign is described relative to Livingston's triangle. This is the triangle formed by the inner border of the sartorius muscle, the inner border of the thigh, and the inner half of the inguinal (Poupart's) ligament. Within this triangle a slight elevation of temperature, erythema, and dermatographia are noted, and there may be also a hyperesthesia to thermal stimuli. These signs should be confined to the triangle, and be maximal at its center, and should disappear within seventy-two hours after drainage of urine is established.

The urinalysis is worthy of special mention, for in a large percentage of the cases the urine will be perfectly normal, and may lead to an incorrect conclusion that the renal tract is not the source of the trouble. The explanation of the presence of normal urine in the face of such severe urinary tract pathology is perfectly simple—if there is a complete block of the ureter, none of the urine will get through to the bladder. There will sometimes be some pus and blood in the urine when a little urine is trickling around the obstruction, or if there is any pathology in the opposite kidney. The important thing to keep in mind is that a "negative urine" does not by

any means exclude the possibility of a blocked ureter.

Also of diagnostic significance is the therapeutic test of relief of pain and the other symptoms with the release of the back-pressure from the obstruction. The prompt relief of pain, which occasionally may be noted even before the cystoscope is removed, is quite striking after a ureteral catheter has been passed beyond the obstruction, releasing the urine which has been retained under pressure.

While a moderate leucocytosis is usually present, it is of little assistance for diagnosis, as the other conditions which are apt to be confused with a blocked ureter would produce about the same reaction.

DIAGNOSIS

The diagnosis then is based on the history of pain starting in the flank or lower abdomen and becoming more severe as time goes on; the presence of tenderness in the lower abdomen and flank, and particularly the presence of a tender palpably enlarged kidney; chills and temperature elevation; nausea and vomiting; normal urinary findings or the presence of pus or blood or both in the urine; hypersensitivity in Livingston's triangle; and finally a relief of the symptoms when the pressure is released by providing urinary drainage.

These various symptoms were present in the series of cases here presented (nine in number) as follows: Pain was present in all nine cases; elevated temperature in eight; vomiting in five (in two others there was no note as to whether or not they had vomited); the kidney was palpably enlarged in six; anuria was the complaint in one; and relief of the pain was obtained following ureteral catheterization in all nine. The urine was normal in two cases, one had anuria, blood alone was found in one case, pus alone was found in one case, and both pus and blood in two cases. In one case no urinalysis was recorded before the cystoscopy.

TREATMENT

The treatment is divided into the immediate treatment and the follow-up treatment. In the acute stage it is worth while to try sedatives such as morphine and atropine for a short time, on the basis that a stone (if it is a stone causing the obstruction) may be passed spontaneously. A number of other antispasmodic drugs have been advocated as being of value in this condition, but we have had no experience in the use of these agents. This conservative means of treatment, however, should not be continued for any great length of time. If pain continues more than a few hours under this regime, or if the intermittent pain of a colic changes to a con-

stant pain of obstruction, immediate relief of the obstruction is indicated.

The simplest procedure by which this can be done, and the one which should be tried first, is the use of the cystoscope. If a ureteral catheter of any size can be passed beyond the obstructed point there will be relief. Even a bougie may answer the purpose, as some of the urine will trickle around the bougie and escape into the bladder. If it is possible, it is advisable to pass several catheters beyond the obstruction in order to dilate the ureter, to promote good drainage, and to pave the way for future passage of the stone if one is present.

The catheter or catheters should be left in position for twenty-four to seventy-two hours, during which time the patient will probably become symptom free or nearly so. During this interval x-ray studies can be carried out, with the catheters in place. I do not think that it is advisable to attempt to take a pyelogram immediately after a kidney has been relieved of the irritation of an acute obstruction. A pyelogram taken at the time of the cystoscopy will probably not be a true picture of the condition of the kidney anyway because of changes from the back pressure. So it would be not only unwise, but useless, to subject the kidney to the additional irritation of a pyelogram at this time. However, a pyelogram taken subsequently may be of great value. This can be easily made after the acute stage of the condition has subsided, and just before the catheters are removed.

Indigo-carmin is of distinct value in the proof of the diagnosis at the time of cystoscopy. This is a blue dye which, when given intravenously, is rapidly secreted by the kidneys. It will appear in the urine from a normal kidney in two or three minutes, and by means of the cystoscope can be seen spurting from the ureteral orifice. The failure of the dye to come from the involved ureter when it is spurting from the uninvolved side, with subsequent drainage of blue urine from the catheter after it has been passed beyond the obstruction, is conclusive evidence that there was a complete obstruction of the ureter.

Lavage of the kidney pelvis with some antiseptic solution may be of value, particularly if there is an associated infection of the kidney, but strict aseptic precautions must be carried out to prevent contamination of the tip of the catheter which would subsequently be forced up to the kidney, possibly introducing some complicating infection.

If a catheter cannot be passed beyond the obstructing point, and the obstructing agent (usually stone) cannot be dislodged, open operation is indicated, for it is imperative that the pressure on that kidney be released or there may be serious and permanent

renal damage. If due to a stone, removal of the stone is advisable. If not, ureterostomy or pyelostomy, perhaps with ureteral dilatation at the time of operation, may be the procedure of choice. The important thing is to get adequate drainage for the urine secreted by that kidney, and to do it before irreparable damage has been done.

After the acute stage has been passed, and the symptoms have cleared up, the indwelling catheters are removed (usually two to three days). If a stone has been the cause of the obstruction, there is a good chance that it may then be passed spontaneously after the ureteral dilatation. Some have advocated the injection of some anesthetic such as novocaine or avertin, into the ureter before its withdrawal, on the theory that it causes further relaxation of the ureter, and aids in the passage of the stone.

If the symptoms should recur after the catheters have been removed, a second cystoscopy should be done, and it may prove to be the means of passage of the stone.

The subsequent treatment should include: (1) removal of the stone if one is found and it has not been passed spontaneously, and (2) ureteral dilatation, and (3) treatment of any residual urinary infection. Removal of the stone is indicated in order to prevent a recurrence of the same condition, and to prevent further kidney damage from infection and back pressure. Even though it may be a so-called "silent stone" its removal is advisable, for while it is "silent" in the ureter, it may be "silently" causing destruction of the kidney. An exception is of course the "staghorn" calculus, but this is an entirely different type of stone from those which are likely to cause acute ureteral obstruction.

Ureteral dilatation is indicated much more often than practiced, and should be done in order to remove any "shelf" that may be present in the ureter at the point of a stricture. Such a shelf may be the cause of stasis, with its consequent danger of infection or new stone formation. These patients should be kept under observation for a considerable period of time, with constant watch for evidence of further damage to the kidney.

Of the group of cases here presented, four had stone. Two of these passed them spontaneously after ureteral catheterization for the relief of the obstruction, and the other two came to operation (one being a pyelolithotomy, and the other a nephrectomy). The five who did not have any demonstrable stones made a recovery following ureteral catheterization, and have had no further trouble. Three of the nine required a second cystoscopy.

CASE REPORTS IN ABSTRACT

Case No. 1. E. N. White woman, twenty years of age. She had pain in the right flank radiating through the right lower abdomen for thirty-six hours, and had been vomiting. Urinalysis was normal. Her temperature was 100 degrees. There was no note as to whether the kidney was palpable. Cystoscopy was done on May 28, 1934, with relief of the pain. The catheter was not left in the ureter. Three days later she had a recurrence of the pain and a temperature of 101 degrees. Cystoscopy was repeated, again with relief of the pain. No stones were visualized in x-ray films. She has never had any further trouble.

(It is quite possible that the use of an indwelling catheter at the time of the first cystoscopy might have avoided the necessity of the second.)

Case No. 2. C. H. White woman, forty-four years of age. She had a pain in the right flank with radiation to the right abdomen and thigh, for twenty-four hours. She had no vomiting. There was some dysuria and frequency of urination, and her temperature was 99-101 degrees. The right kidney was palpable and quite tender. Urinalysis before cystoscopy was not noted. On October 4, 1934, cystoscopy was performed, leaving an indwelling ureteral catheter which relieved the pain. The urine draining from the catheter contained a large amount of blood and pus. X-ray with the catheter in place showed two stones in the kidney (one of which had probably been pushed up by the catheter). The function of the kidney, as measured by an intravenous phenolsulfonphthalein test, was very poor. The catheter was removed after two days, and forty-eight hours later the pain suddenly returned with a temperature rise to 104 degrees. A catheter was again passed to the kidney, again giving relief of the pain. Because of the presence of the stones, operation was advised. At operation the kidney was found to be merely a hydronephrotic sac. Because of this, with the previously demonstrated poor function, nephrectomy was thought to be the procedure of choice. She made a good recovery.

(Although the ultimate result here was satisfactory, she might have been saved one cystoscopic procedure by performing the operation after the first cystoscopy. The patient was reluctant to have an operation, however, until she had a recurrence of the pain after removal of the catheter.)

Case No. 3. P. W. White male, fifty-six years of age. He had a right sided abdominal pain for twelve hours which was suggestive of acute appendicitis. Routine urinalysis showed ten blood cells per field, and a flat x-ray film showed a suspicious shadow which was thought to be a ureteral stone.

A cystoscopy on January 30, 1936, leaving an indwelling ureteral catheter for drainage, gave him relief of the pain. The urine draining from the catheter had pus and blood in much higher amount than in the bladder urine. X-ray showed the shadow noted above had been pushed up to the kidney pelvis by the passage of the catheter. The catheter was removed after twenty-four hours, and he subsequently had an attack of ureteral colic in which the stone was passed. He has had no further trouble.

(This case demonstrates the problem of differential diagnosis with this condition and acute appendicitis, with the finding of blood cells in the urine as the clue which led to the correct diagnosis.)

Case No. 4. C. C. White woman, fifty years of age. She had a right nephrectomy eight years before for a calculous pyonephrosis. The pain began, sixty hours before cystoscopy, in the left flank and radiating down to the lower abdomen. There was associated nausea and vomiting, and had been a total anuria for twenty-four hours. Her temperature was 102.4 degrees. A cystoscopy was performed on March 4, 1936, leaving an indwelling ureteral catheter in place, which gave her relief of the pain. X-ray examination showed a stone in the kidney pelvis, and on March 6, 1936, the stone was removed from the kidney by open operation. She made a good recovery, and has had no subsequent trouble.

(This type of patient represents a very poor risk for operative procedures, but if any success is to attend treatment, it is even more urgent that it be done promptly than in any other group.)

Case No. 5. A. M. White woman, twenty-four years of age, unmarried. This patient had had some urinary frequency for about two weeks. There was an onset of severe intermittent right lower quadrant pain two days before she was seen, which gradually became a constant pain over the entire right side of the abdomen. She vomited repeatedly. Her temperature had risen to 103.6 degrees. The right kidney was palpably enlarged and tender, and there was tenderness over the course of the ureter. Cystoscopy was done on August 18, 1936, when a No. 5 F. catheter was passed beyond the obstruction and immediately drained 30 c.c. of urine containing a large amount of pus and blood. An attempt was made to pass a second catheter alongside the first, but it would only go 1.5-2.0 c.m. up the ureter. Both catheters were left in place, and the pain was relieved, but before x-rays were taken the following morning, they had either slipped out or had been pulled down out of the ureter. She had a recurrence of the pain, and that night (August 19) the second cystoscopy was done and a No. 9 F. catheter passed. She again obtained a relief of pain, and temperature

with the drainage of urine which contained a large quantity of both pus and blood. Flat x-rays and pyeloureterograms were normal. On August 21, after forty-eight hours of drainage, the catheter was removed, and she has been free of symptoms since

(In this case the unintentional and premature removal of the catheter probably were responsible for the necessity of doing the second cystoscopy.)

Case No. 6. L. S. White woman, forty-five years of age. On October 3, 1936, a diagnostic cystoscopy was performed, a moderate ptosis being the only significant finding. There was an interesting double ureter on the left, but it had no connection with her subsequent complications. Soon after the cystoscopy she began to have right sided pain, and her temperature rose to 105 degrees two days later. On October 8 (five days after the original cystoscopy) her pain was quite severe, her temperature again reached 105 degrees, and the right kidney had become palpably enlarged and very tender. Cystoscopy was done, leaving an indwelling ureteral catheter. More than an ounce of bloody urine was drained from the catheter immediately. The catheter was left in four days, at which time she had become free of pain and her temperature had dropped to normal. She has had no further trouble with the kidney, though she has been seen several times for other illnesses.

Case No. 7. A. G. White woman, fifty-six years of age. She had an oophorectomy for a large cyst only a few months before this admission. For three or four days she had a right sided abdominal pain with nausea and vomiting, and a temperature of 102 degrees. There was tenderness over the right kidney, and it was thought to be palpable, though she was a rather obese woman and palpation was difficult. Cystoscopy was done the night of March 24, 1938. The catheter which was left in the right ureter drained grossly bloody urine whereas the urine before cystoscopy had contained only twenty to twenty-five pus and blood cells. She was relieved of her pain, vomiting and fever. X-ray revealed no stone. The catheter was removed after forty-eight hours and she has been symptom free ever since.

(This case presented a picture which was suggestive of an acute cholecystitis for the first few days of her illness, and the difficulty in palpation because of obesity added to the problem of diagnosis. The blood and pus which were noted as being in the urine were not present the first day of her illness.)

Case No. 8. O. W. White male, twenty-six years of age. He had had a left sided kidney colic intermittently for eleven days, followed by a constant pain in the left side of the abdomen and flank for about twenty-four hours, with frequent vomiting.

His temperature was 101, and the left kidney was palpable and tender. The urine contained 100 blood cells and an occasional pus cell. Cystoscopy was done on March 28, 1938. Indigo-carmin injected intravenously did not appear from the left ureteral orifice during several minutes observation after it had appeared on the right, but when a catheter was passed beyond the obstruction (which was accomplished with considerable difficulty) it drained urine stained with the blue dye. The catheter was left in place forty-eight hours, during which time he was completely relieved of his symptoms. X-ray showed a small stone in the ureter. After the removal of the catheter he had one more colic and passed the stone.

(This case illustrates the typical change from the intermittent pain of ureteral colic during the progress of a stone down the ureter, to the constant pain from back pressure of the ureter and kidney after the impaction of the stone with obstruction of the ureter.)

Case No. 9. J. S. White male, seventy-five years of age. He had had a pyuria for some time. Eighteen hours before the cystoscopy he had the onset of a pain in the left flank, with a chill and temperature of 104.5 degrees. His temperature on admission to the hospital was 101.2 degrees, and he was quite tender over the left kidney and through the left lower quadrant. His urine was reported as being "less cloudy than usual" during the interval since his chill. Cystoscopy was performed on November 13, 1938, and a catheter passed to the left kidney drained urine with a large amount of pus and some blood. The catheter was left in situ for forty-eight hours. X-rays showed no stones, and a pyelogram was practically normal. Twenty-four hours after the removal of the catheter he had one chill, with a temperature rise to 105 degrees, but thereafter his temperature dropped to normal and remained so. He has had no further recurrence of his trouble.

SUMMARY

The condition of acute obstruction of the ureter, or "blocked kidney" is presented as a condition worthy of consideration because of the frequency of its occurrence, and the permanent damage that may result from inadequate or too-long-delayed treatment. Diagnosis is based on the presence of persistent pain in the lower abdomen or flank, sometimes associated with a palpably enlarged and tender kidney, perhaps associated with nausea, vomiting, chills, and high temperature, occasionally with anuria, and frequently with normal urinalysis. Prompt relief of the obstruction is indicated, and is followed by gratifying relief of the symptoms. The use of the indwelling ureteral catheter is advocated for this condition, and adequate x-ray studies should

be carried out as an aid in determining the etiology of the condition. Subsequent treatment should include the removal of any stones found to be present, whether causing acute symptoms or not. Ureteral dilatation is advisable to prevent ureteral stricture with stasis and infection and its resultant possibility of new stone formation and permanent kidney damage. A series of nine personal cases are briefly reported.

ACKNOWLEDGMENTS

I wish to thank Dr. W. M. Mills for the opportunity of presenting those cases which were seen in my association with him. Dr. A. D. Gray performed the cystoscopies on cases No. 1 and No. 4, and gave helpful suggestions on the management of several others. In addition to Dr. Mills, who saw all but one of these cases at some stage of their illness, acknowledgment is made to the physicians who first saw the patients and requested consultation with either Dr. Mills or myself—Drs. M. G. Sloo, J. H. O'Connell, S. A. Hammell, H. T. Morris, D. C. Wakeman, F. C. Taggart, and C. K. Schaffer.

THE APPENDIX AND WHAT TO DO WITH IT

Clyde Wilson, M.D.

Emporia, Kansas

In this paper I shall attempt to give a short resume of our present knowledge of disease of the appendix together with my own personal observations and opinion relative to treatment.

Anatomically the appendix is the vestigial remains of a previously functioning viscus. It is in reality the diverticulum of a diverticulum. During the evolutionary process of man this viscus has lost its physiological function and has become one of the chief sources of intra-abdominal pathology.

Infection of this diverticulum to the young surgeon brings great joy. To the seasoned veteran oft times sleepless nights and corresponding days of anxiety and to the patient too often a rapidly spreading fatal peritonitis that the appendix has been responsible for countless deaths antedating medical history there can be no doubt.

Mestiver, in 1759,¹ is credited with having operated upon the first case of localized appendicitis and described clearly the pathological appearance at autopsy. Yet, it seemingly did not impress the medical world at that time. James Parkinson, in 1812,² reported the first case of appendicitis in English, this case being also the first in which per-

foration was recognized as the cause of death. Sir Fredrick Treves, in 1884, wrote accurately of appendicitis and peritonitis.

To Reginald Fitz of Harvard, in 1886, belongs the credit for having introduced the term appendicitis and the first to advocate its timely surgical intervention.

It is not wise nor permissible to inject patriotism in science, yet, we must recognize that American surgeons, Nicholas Senn, Ochsner, Murphy, McBurney, Deaver, Cartilage, Dugan and a host of others were the pioneers in the advancement of our study of disease of the appendix and have taken the lead in bringing its surgical treatment to its present high standard as a life saving procedure.

Pain, tenderness, vomiting, muscular rigidity and fever are the classical clinical symptoms of acute uncomplicated appendicitis. One or more of the symptoms may be absent or so slight as to escape notice. I feel that pain is a constant symptom and of all physical findings rebound pain in or near McBurney's point is pathognomonic of acute appendicitis. In retrocaecal appendices rebound pain in the region of Petir's triangle is rarely misleading.

There is no age exempt from appendiceal pathology. Yet, fifty per cent of all cases are seen during the first two decades, more frequently in the male than female (on account of blood supply), more frequently in the white than colored, and less frequently under five years of age. That there is a marked familial tendency to appendiceal involvement there can be no doubt. I have seen and helped appendectomize whole families.

In this paper I shall recognize only two types of appendicitis. Namely, the acute and neglected. The symptoms presented by an acute appendix have already been mentioned. Those in the neglected are variable, depending upon the time when seen by the surgeon, the amount and kind of home treatment, and resistance of the individual. In the neglected case we first see (1) acute appendicitis with early perforation (2) perforated appendix with abscess formation (3) a perforated appendix with rapidly spreading general peritonitis. I do not believe that the so-called chronic appendix is a separate clinical entity, but rather nature's attempt at repair of a previous acute attack and through fibroblastic infiltration has produced a fibrosis—a fibrotic appendix if you please.

The diagnosis of appendicitis is so easy as to be oft times mistaken. The classical case is usually diagnosed by the family and only awaits the confirmation of the surgeon.

It is the atypical case that so frequently gives us concern. Appendicitis must be differentiated from

pneumonia, pleurisy, empyema, cholecystitis, gastric or duodenal ulcer especially if perforated. Pernicious anemia diabetis. Renal calculi, pyelitis, cysto pyelitis, ureteritis, para renal abscess, stone in ureter. Meckels diverticulitis, pancreatitis, pneumococcic peritonitis, intussusception, volvulus, internal strangulation, mesenteric cysts, carcinoma of caecum, gastric crisis of tabes dorsalis, intestinal polypi, oophoritis, salpingitis, tubal pregnancy, incomplete inguinal hernia, hernia through Hesselbach's triangle, intestinal and inguinal adenopathy, and arthritis involving last dorsal and lumbar vertebra.

An intelligently elicited history and careful physical examination together with the aid of the roentgenologist and clinical laboratory, if need be, will furnish enough evidence in the majority of cases to establish a correct diagnosis. I do not wish to discredit the value of blood counts. We do them routinely, but look upon them as merely confirmatory. Disaster awaits him whose surgical judgment is based on counts alone when dealing with this condition.

It has been urged by some that one should never operate upon a case on the fifth day from its onset, for reasons that the mortality rate is appalling. I have no sympathy with this belief, as some of the most spectacular cases from the standpoint of recovery that I have had were operated upon the fifth day. Such conclusions to me seem analogous to the farmer's opinion that he must council with the zodiac before setting out on his spring entourage as a barnyard surgeon.

Patients when seen that are dehydrated should have their fluid and mineral balance restored if possible and if anemic a blood transfusion should be done, exercising every care especially if the patient already shows a damaged myocardium. This should be done before or during operation lessening the time of preparational care, if possible. The type of anesthetic is important and should be left to the judgment of the surgeon or medical associate, as every case is a law unto itself. Children will require a general anesthetic while with those in early adult life and older spinal anesthesia is most satisfactory, especially when dealing with a ruptured appendix and its complications. Local anesthesia has its place in certain selected cases.

An annual mortality of nearly 20,000 in the United States alone leads me to feel that we are too far apart in our conclusions when dealing with appendicitis and its complications.

Removal of an acute uncomplicated appendix in the hands of a trained surgeon is the safest and most satisfactory of surgical procedure.

Watchful waiting, as advised and urged by Ochsner, I mention only to condemn as a routine

measure. In those cases in which it is felt advisable to defer operative interference, the treatment should be instituted and supervised by one expert in surgical management.

In those cases with abscess formation that are well walled off, transperitoneal drainage is quite satisfactory. The appendix is removed at some subsequent date.

Early in my career, after having operated upon a number of ruptured appendices with peritonitis, I have been distressed to see the gaseous distention continue and the patient's abdomen take on a glazed appearance. The respiration become more difficult and the anxious look on the patient's face almost haunts you. I have returned to those patients bedside the following morning to find them cheerful with a flat abdomen and a large mass of foecal matter beneath the dressing. Nature had established a fistula.

In 1922 at St. Marys Hospital in Emporia I determined in similar cases to establish my own fistula. I did this at first only on those cases where there was a definite extensive peritoneal involvement. The results were so satisfactory that in all cases of appendicitis where there was free fluid in the abdomen I established a controlled fistula, decompressing the colon and lower part of small intestines. The technic is simple; through a gridiron incision over McBurney's point the cavity is opened and the appendix delivered into the wound if at all accessible. The meso-appendix is clamped and ligated. A purse string of cat gut is introduced around the base of the appendix. The appendix is then removed at its junction with the caecum. An 18F soft rubber catheter is threaded through the appendiceal orifice into the caecum and anchored with cat gut. The appendiceal stump is inverted around the catheter and made secure. If removal of the appendix is not advisable the catheter is introduced through a stab wound in the caecum employing the same technic. A cigarette drain is passed to the bottom of the abscess or abdominal cavity and the wound closed. At four hourly intervals from four to eight ounces of salt water was introduced through the indwelling catheter into the caecum. This was done to maintain fluid and chloride balance as fluids are mostly absorbed from the first portion of the large intestines. The abdomen remains flat. Voluntary defecation occurs on the fifth or sixth day. The catheter is removed usually on the eighth day. There has never been any fecal drainage following its removal. Feeding the patient per orem was begun immediately following the removal of the catheter. The cigarette drain is removed at a later date. I have never had a case of ileus when employing the above technic. Through the above technic I have been

enabled to reduce my mortality from twenty-five to one per cent.

I reported the technic of this procedure to a group of the Interstate Post Graduate Assembly on European tour in 1927, but since that time I have improved the management of these cases. Instead of using salt water alone I use five or ten per cent glucose in salt water through the indwelling catheter continuously by the drop method at the rate of eighteen to thirty-six drops the minute. This method is preferable to the usual venoclysis as glucose given parenterally escapes the glycogen barrier of the liver. Caecal alimentation is analogous to oral feeding which is always preferable.

I have recently used an .8 per cent solution of sulfanilamide as advocated by I. S. Ravdin of University of Pennsylvania with gratifying results. This is administered through the catheter into the bowel. In those cases showing an hypersensitivity to sulfanilamide nicotinic acid was found helpful. In those cases evincing evidence of peripheral circulatory failure adrenal cortical hormone fulfills a useful indication. The nasal tube with negative pressure is used almost routinely to decompress the upper gastrointestinal tract and allow the patient to drink water at will, thereby converting a fretful patient into a cooperative one. Should high caloric feeding be felt advisable fifty c.c. of alcohol added to 1000 c.c. of salt water and glucose given by venoclysis is very helpful as suggested by Helwig and others. Employing the foregoing technic in those complicated cases of appendicitis with peritonitis my mortality has been nil. In those cases in which the appendix was not removed at operation the patient is advised to return for its removal within two or three months unless they should suffer an exacerbation of symptoms.

Success as a surgeon in dealing with appendicitis and its complications much depends upon early diagnosis and early surgical interference.

BIBLIOGRAPHY

1. Les débuts de l'histoire de l'appendicite in France Presse Médicale, Paris 1903:347-441.
2. Med. Chir. Td., Lond. 1812 III 57.

According to the 1939 report on Distribution of Patients in General Hospitals; not including children's orthopedic, maternity, industrial, and eye, ear, nose and throat hospitals; Kansas had 15,782 admitted, with the average number of days given as 10.90, in the state, city and county hospitals during the year. Report from June, 1940, issue of Hospitals.

Get busy, doctors! Find out at the next meeting of your medical society what organized medicine can and must do with that basic weapon of democracy—the ballot.—The Illinois Medical Journal.

LOBAR PNEUMONIA COMPLICATED BY DIABETES TREATED WITH SULFAPYRIDINE

REPORT OF A CASE

C. B. Johnson, M.D.

Eudora, Kansas

Mrs. F. R., age forty-six, weight 190, height five feet six inches. Patient was first seen at midnight on November 24, 1939, complaining of severe pain, shortness of breath, inability to lie down and bloody expectoration.

Previous complaint and history: Patient had been losing weight for the last six months. She was tired all the time. It was hard for her to get about and do her work. Her periods were regular but she ascribed the weakness to "change of life." She had had no serious illnesses in the past. Her mother died at an advanced age of diabetes. There is no history of malignancy or tuberculosis in the family.

Physical examination: Eyes, throat, head and neck negative. Heart rapid, otherwise negative. Blood pressure 150/68: Pain, knifelike in character, located in right side just above liver. Respiration limited due to pain. Breath sounds increased over right chest posteriorly. Abdomen possibly a little distended. No tumor masses felt. Extremities negative. Temperature 102 degrees, pulse 120, respiration 36. Pain was relieved with morphine gr. $\frac{1}{4}$ by hypodermic. Hot applications to side and expectorant cough medicine given.

Due to misunderstanding through poor telephone connection, patient was not seen again until seven p.m. the following evening. At this time the pain was considerably less. Temperature 102 degrees, pulse 120, respiration thirty-six. Examination of chest showed consolidation of lower right lobe. Patient removed to hospital by ambulance. Upon admission sputum was obtained for examination and type VII Pneumococcus found.

Patient was given insulin units forty and three grams sulfapyridine, in four hours two grams sulfapyridine and four hours later one gram. Then grams one were given every four hours until further ordered. Blood sugar taken at seven thirty a.m. was 267 milligrams.

Urinalysis:

Sugar 3.55 per cent

Acetone 4+

Diacetic acid 4+

Insulin units twenty were given three times a day.

Pantapone 1/6 gr. as needed for pain. Diet of diabetic fruit juice, coffee, clear broth, gelatin, diabetic custard and milk. In the evening of this, the second day of the disease, temperature was 101 degrees, pulse 120, respiration thirty.

November 27. Findings at ten a.m. were as follows: Temperature 99 degrees, pulse 114, respiration thirty. Lower right lobe filled with moist rales and patient breathing more comfortably.

Urine showed:	Blood examination:
Sugar 4.8 per cent	Hg. 81 per cent
Acetone 4+	RBC 4,620,000
Diacetic acid 4+	WBC 26,150
No albumen	Poly. 88 per cent
No casts	

Blood sugar determination at seven thirty a.m. 454 milligrams. Due to the climbing blood sugar on the low carbohydrate diet, the patient was given insulin units sixty-three times a day. At four p.m. temperature was normal, pulse 110, respiration twenty-four. Examination of right chest showed affected lobe clearing rapidly. Sulfapyridine was decreased to one-half gram every four hours.

November 28. Temperature, pulse and respiration were normal. Blood sugar down to 287 milligrams. Trace of sugar in urine with acetone and diacetic acid 2+. Dosage of sulfapyridine was further reduced to one-half gram every six hours. This was continued for three doses, then discontinued entirely.

November 29. Insulin was decreased to units twenty-five three times a day. Patient continued to improve and temperature, pulse, respiration remained normal during convalescence. Patient was discharged by ambulance December 2. At which time blood sugar was 238 milligrams. Urine free from sugar, acetone and diacetic acid.

Summary: Sulfapyridine was started twenty-two hours after onset of the pneumonia. Temperature was normal and remained so sixty hours after onset and thirty-eight hours after first dose of sulfapyridine. Total amount of drug given was 18½ grams. At no time during administration of sulfapyridine did the patient complain of nausea. Type VII serum was considered but due to the patient's rapid improvement, it was not administered.

Suggests clue to cyanosis mechanism: A possible clue to the mechanism of cyanosis or blueness of the skin which may result from treatment with sulfanilamide is suggested in The Journal of the American Medical Association for March 2 by H. D. Furniss, M.D., New York, who reports that cyanosis, nausea, headache and vomiting incidental to treatment with the drug were relieved in a group of his patients by the administration of nicotinic acid.

LYMPHOGRANULOMA INGUINALE

TREATMENT WITH SULFANILAMIDE CASE REPORT

M. Bernreiter, M.D.*

Kansas City, Kansas

Lymphogranuloma inguinale is a contagious disease transmitted by sexual intercourse. Men predominate among the victims of the inguinal form, but the anorectal localization is seen often enough in women to possibly equalize the sex distribution. The initial primary lesion on the external genitalia is not often seen, but the incubation time after exposure is between ten and thirty days. After this period the inguinal glands on one or both sides become swollen and tender; there is a gradual progressive until a fist size mass, bound together by peradenitis, is formed and then breaks down and fistula formation takes place. A thick sero-purulent fluid drains for weeks and months. Multiple sinuses connect the suppurating glands with the surface. General disturbances as fever, weakness, headache, rheumatoid joint swelling and rashes are frequently connected with this disease.

It seems very probable that the older disease known as "climatic bubo", which was first described by Trousseau in 1865, was the same disease which is now recognized as lymphogranuloma inguinale. Ruge in 1896 reported a number of inguinal adenopathies classified as venereal among sailors upon six ships blockading the Zanzibar Coast. Godding, a surgeon in the British navy, in 1896 reported this condition which he observed on the east coast of Africa.

Originally considered to be only tropical in its distribution it is now recognized as occurring practically everywhere, though until quite recently most of the reports have come from European countries. DeWolf and Van Cleve have made the diagnosis in fifty-eight cases in the Cleveland City Hospital between August 1930 and March 1932. Many noteworthy publications, too numerous to mention have since appeared in the American and European literature.

DIAGNOSIS

A fully developed lymphogranulomatous bubo is no difficult diagnostic problem. But in its earliest stage one must consider simple glandular swelling, syphilis, chancroid bubo, tuberculosis, Hodgkin's disease, lymphatic leukemia, malignant tumors or tularemia.

* University of Kansas School of Medicine, Kansas City, Kansas.

The blood changes in this disease show an increase in leucocytes and a very minor degree of anemia. Mild eosinophilia is occasionally present.

Attempts to find a specific organism for this disease have so far been fruitless. A number of observers have described various bodies ranging from pseudodiphtherialike bacilli to protozoa, but none of these observations have been confirmed.

The Frei reaction appears to be specific for this condition and is of special value in doubtful cases. It consists of intracutaneous injection of an antigen prepared from the pus withdrawn by aspiration from the bubo. The results are read after forty-eight hours and not before. A positive reaction consists in the production of an infiltrated inflammatory dome-shaped area one-half inch in diameter at least, and often larger, which can be felt as well as seen. It is often noticed that there is a small area of necrosis in the center surrounded by a red zone.

TREATMENT

The literature lists many methods of treatment including quinine, iodides, emetine, antimony, arsenicals, methylene blue, copper ammonium sulphate and chimiofon, vaccines from the pus from bubos, x-ray and radium therapy, injection of tuberculin, foreign proteins, glycerine and many others. Surgical removal of the infected glands is usually followed by recurrence. This conglomeration of therapeutic attempts is perhaps the best proof that up to the advent of sulfanilamide there has been no really effective chemo-therapeutic method for the treatment of venereal lymphogranuloma. As late as 1939 Knight and David in their publication cited below write as follows: "We have reached a rather fatalistic attitude toward the clinical cure of the disease until our experience with sulfanilamide, which we believe should be given a thorough trial in all recognized lesions of the disease."

Our patient a young man of twenty-five, was first seen September 9, 1939 with the complaint of severe pain and swelling in the left inguinal region. He walked somewhat stooped to relieve the pressure in that area. This condition began six days ago and became rapidly worse. He lost about ten pounds in that time; had no desire for food and his sleep was much disturbed. The past history was irrelevant, except that the patient had gonorrhea about three years ago. The present condition was not preceded by any penial sore and luetic infection in the past was denied.

On examination the patient was pale and slow in his movements. On physical examination all findings were negative except the swelling, redness and tenderness in the left inguinal area. This mass was

about the size of a small fist, extremely tender to pressure, and fluctuating. Temperature: 99.8. Laboratory work, including Kahn test, was normal. Blood count was as follows: hemoglobin: eighty per cent, C. I.: 1.R. B. C.: 4,000,000 W. B. C.: 9,800 polys, segmented: forty-six per cent unsegmented: seventeen per cent lymphocytes: thirty-three per cent eosinophils: two per cent monocytes: two per cent.

It was felt at that time it would soon become necessary to incise the fluctuating area, and the patient was advised to remain in bed, apply heat and take sedatives as prescribed for relief of pain. After two days patient continued to have pain in the left inguinal area, nausea and inability to sleep. A Frei test done previously was found to be strongly positive after twenty-four hours. There was more swelling in the left inguinal area and fluctuation was more pronounced. Spontaneous perforation in the center of the fluctuating mass seemed inevitable. Patient was now put on sulfanilamide as follows: first day: eighty gr., second day: sixty gr., third day: sixty gr., fourth day: fifty gr., and forty gr. per day thereafter. On the fifth day of this medication patient had much less pain, was able to sleep and his appetite had returned. The area in the left groin was still fluctuating. From there on the patient made a rapid and complete recovery within ten days. The swelling completely disappeared in that time, leaving a brownish discolored area on the skin, which is still present after three months.

The patient was watched carefully for any possible toxic or allergic reaction from sulfanilamide but none were encountered. Frequent blood counts and hemoglobin estimations were done. A leucocytosis of 15,000 developed soon after beginning of treatment with sulfanilamide and returned gradually to normal as the patient improved. The red count and hemoglobin showed no variations throughout the course of the disease.

Because this patient seemed rather severely ill when first seen after medication with sulfanilamide made such a rapid and complete recovery within a comparatively short period of time, this case seems of enough interest to be reported.

BIBLIOGRAPHY

1. Gradwohl R. B. H. Clinical Laboratory Methods and Diagnosis, C. V. Mosby Co. 1938.
2. Trousseau, A: De l'adenie Clinique Medicale de l'Hotel-Dieu de Paris.
3. Ruge R. Die der Zanzibarkueste eigentuemlichen klimatischen Leistdruesenentzuendungen, Arch. f. Dermat. & Syph. 1896.
4. Beckman H. Treatment in General Practice W. B. Saunders Company 1934.
5. Sutton & Sutton: Diseases of the Skin, C. V. Mosby Co.
6. Knight Alva A. and David Vernon C. 1935. The treatment of Venereal Lymphogranuloma with Sulfanilamide, J. A. M. A. Vol. No. 6 p. 527.
7. Frei W. Venereal Lymphogranuloma J. A. M. A. Vol. 110 No. 20 p. 1653.
8. Frei W. New Skin Reaction in Lymphogranuloma Inguinale. Klinische Wochenschrift 4:2148, 1925.

President's Page

To the Members of The Kansas Medical Society:

The American Medical Association is about to secure information relative to the availability and qualifications of professional personnel for service in the federal preparedness program.

Kansas Medical Society will cooperate in the successful operation of this plan. As soon as details of the plan are known to us, the members of the Kansas profession will fill their quota without delay.

There is still another way to cooperate in a preparedness program. In a time of stress when subversive influences are operative on every front; when political, social and economic uncertainty prevails, the duty of every citizen to take an active interest in the affairs of government becomes paramount. No community, and as a rule, no individual citizen residing therein, is endowed with a natural immunity to such influences. We must acquire it by developing an overwhelming interest in our own particular problems and a willingness to sacrifice to the end that these problems will be rightly solved. If our problem is one of medical interest involving the physical and mental welfare of our citizens, we must become civil minded and contact candidates for legislative office and ascertain their view point relative to medicine in particular and public health matters in general. We are then in a position to act knowingly. Our best weapon of defence is the government itself. Let us see to it that our government is invulnerable to such influences.

Sincerely,

A handwritten signature in dark ink, reading "Loren Loveland M.D." in a cursive script.

President, Kansas Medical Society.

EDITORIAL

MOBILIZING THE MEDICAL PROFESSION

Dr. Olin West, acting as secretary of the newly formed Committee on Medical Preparedness, has written to the constituent state and territorial medical associations, requesting that a member of each state and territorial association be nominated to serve as state representative.

Dr. Forrest Loveland, President of the Kansas Medical Society, has been nominated to represent Kansas. This is a selection which should meet with the hearty approval of the profession of Kansas.

In discussing mobilization plans, the officers of the Kansas Society have expressed the opinion that the use of a special committee of the state Society can be of the greatest efficiency in organizing and coordinating the work of mobilization. It has been recommended to the national committee that a questionnaire be prepared for obtaining information as to previous war service, specialties practiced, qualifications, number of dependents and other data required to enable the committee to make selections for military and civil service.

At the recent meeting of the House of Delegates convening in New York City, Colonel G. C. Dunham, Medical Corps, United States Army, presented a tentative plan for the procurement of professional personnel for the Army Medical Corps in the event of a national emergency. Colonel Dunham's plan was prepared by the office of the Surgeon General of the Army and submitted to the House of Delegates for consideration. According to this plan the American Medical Association is to be asked to conduct a survey of the medical profession through its state and local organizations. County societies are to be asked to canvass their members for those who express willingness for military service and those who desire for any reason to remain at home. Those who are selected for military service will be listed according to their professional qualifications in the various specialties. The medical department of the army is to have one or more selected officers

on duty at the A. M. A. headquarters. Each Corps Area is to call upon the American Medical Association for physicians or specialists as and when they are required. Each state is to be called upon to furnish personnel for the medical corps according to its quota.

According to the statement of Colonel Dunham before the House of Delegates of the A. M. A. The Surgeon General's Office recognizes the necessity to conserve the medical profession. Therefore, the plan is to distribute the selection of physicians and specialists equally and without stripping isolated and rural districts of their medical practitioners.

The plan conceived by the Surgeon General's Office of coordinating the selection of physicians through state and county medical organizations should be a practical method in the drafting of medical personnel for the Army Medical Corps.

War will require sacrifice upon the part of those physicians designated to remain at work in civil practice as well as of those selected for military service. Personal preference for civil or for military service must give way in a national emergency. The opportunity to serve in the role for which the individual is best qualified should be the aim and purpose of every American doctor.

SOLUTION OF POSTERIOR PITUITARY

It is a significant point that the Section on Obstetrics and Gynecology of the 1940 meeting of the A. M. A., would devote a third of its time to the discussion of the use of solution of the posterior pituitary during labor.

Posterior pituitary extract was discovered and introduced to the medical profession some twenty five years ago. Its advent was hailed as a panacea to all obstetrical problems such as primary and secondary uterine atony, insufficient muscular power of the uterus to produce termination of labor, obstetrical hemorrhage and induction of labor. Undoubtedly, it was paraded before the Section on Obstetrics and Gynecology with much greater fervor and enthusiasm at a previous meeting than at the meeting just concluded.

Dr. John L. Sharkey of Philadelphia in the opening

paper in this symposium states that "the use of posterior pituitary preparations before the third stage of labor places a grave responsibility upon the attending physician". He goes on to say that "their use in normal labor to hasten delivery is to be condemned". He raises the question, however, "as to the advisability of the use of solution of posterior pituitary in primary uterine inertia".

Dr. G. F. Pendleton of Kansas City gave a statistical review of many obstetrical cases in some of the Kansas City Hospitals in 1932, showing a higher than average maternal and fetal morbidity and mortality. He showed lantern slides demonstrating the marked decrease to below national average in morbidity and mortality in the three or four years, following publicity in local society and hospital staff meetings, concerning the frequency with which this morbidity or mortality was associated with the administration of solution of posterior pituitary. The important role that posterior pituitary extract played in the maintenance of this high morbidity and mortality is quite well proven by the drop in such figures following such an educational program.

Dr. Joseph B. DeLee of Chicago, in his discussion, made the statement that "he is sure that if uteri will rupture following the administration of posterior pituitary preparations in his practice, that uteri will rupture for the same reason in the practice of others." He, also, assails the cloaking of posterior pituitary preparations under the trade names of thymo-physin, thymo-pitson and others.

When the meeting was thrown open for discussion from the floor, champions for the use of solution of posterior pituitary in the first and second stages of labor were few and far between. Dr. A. B. Davis of Camden, New Jersey, remarked that "posterior pituitary solution is occasionally indicated in the second stage of labor, in cases of primary uterine inertia, where there is no obstruction to the birth canal, provided the dose is very small and not too frequently repeated. The frequency of such a condition is about once in five-hundred and seventy cases".

In order to intelligently discuss the use of solution of the posterior pituitary in obstetrics, one must first have a clear conception of two things, the

physiological action of the drug itself and the ability of the uterine muscle to contract.

Solution of the posterior pituitary is an extract of the posterior lobe of the pituitary gland. It is capable of producing contraction of the smooth muscle of the body, not alone of the uterus but, also, of the intestine, arterial walls, etc. The dose necessary to produce an average physiological effect varying from a small quantity in certain individuals to several times that amount in others. The available commercial preparations vary markedly in strength from the weaker combined solutions of thymus and posterior pituitary solutions to strong solutions such as "Infundin" and "Surgical Pituitrin". Solution of posterior pituitary gland produces a tetanic type of contraction of the uterine muscle, the tetany lasting from a few seconds to several minutes, followed by a tonic contraction with inadequate interval uterine relaxation. Prolonged tetanic and tonic contraction of the puerperal uterine muscle is apt to produce serious disturbance to the nutrition of the unborn child.

In considering the ability of the uterine muscle to contract, one must divide the function of the uterine muscle into three classes, namely, hypotensive muscular contraction, normo-tensive muscular contraction and hypertensive muscular contraction. The mechanism of labor in the hypo-tensive type is apt to be altered because of inadequate muscular power of the uterine fundus, either with regular or irregular pains. However, the progress of labor may be fast, average or slow, depending upon the resistance of the cervix and soft tissues of the birth canal. It is in this class that primary uterine inertia is most frequently found. Normo-tensive myometrial contraction usually produces average progress through the first and second stages of labor. Both the hypotensive and the normotensive types of uterine contraction are associated with complete uterine muscle relaxation in the interval between contractions which permits adequate nutrition and circulation to the uterine muscle and placental site. Hypertensive uterine contraction is a condition in which the muscular contraction phase is excessive and the interval uterine relaxation is inadequate, thereby producing poor nutrition to the myometrium and placental site. The tone of the cervix is usually

high and the resistance to dilatation is great. It is in this class that secondary uterine atony is most apt to occur.

Now having considered the drug and the types of uterine muscular contraction, one can correlate the two in an endeavor to define proper indications for the therapeutic application of solution of posterior pituitary.

Posterior pituitary solution is absolutely contra-indicated in either the first or second stage of labor in the hypertensive type of uterine muscular contraction because it exaggerates an undesirable condition which already exists. It is absolutely contra-indicated in the first and second stages of labor in the normo-tensive type of uterine muscle contraction because it is not possible to improve this type of contraction and because of the danger of producing tetanic uterine contraction with resultant damage to the uterine muscle and/or the unborn child. Solution of posterior pituitary may possibly be indicated in certain carefully selected cases of the hypo-tensive type of uterine muscular contraction, at the end of the first stage of labor when one is absolutely certain that uterine inertia is of the primary type and not due to uterine fatigue or some barrier to the passage of the unborn child through the birth canal. Therein, one must depend upon the judgement of the operator as to which is the safer for the mother and her unborn child, accelerated labor through the stimulation with posterior pituitary preparations or judicious observation and probable sedation. The administration of posterior pituitary preparations for the induction of labor, or during the first stage is fraught with danger and is never justified.

During the third stage of labor, after the separation of the placenta and either before or after its delivery, solution of posterior pituitary comes into one of its most important roles, providing there is no systemic contra-indication to its use. It is also of invaluable aid in early abortion, either complete or incomplete, prior to or coincidental with intra-uterine instrumentation or manipulation of the puerperal uterus.

Thus one can sum up the many contra-indications and indications for the therapeutic administration of solution of posterior pituitary as follows:

Contra-indications:

1. Induction of labor.
2. First stage of labor.
3. Second stage of labor in normo-tensive and hypertensive types of uterine muscular function.
4. Secondary uterine inertia regardless of its etiology.
5. Incompatibility of the birth canal and its passenger.
6. Placenta Previa.
7. Premature separation of the placenta.
8. Systemic conditions such as arterial hypertension and individual idiosyncrasies.

Indications:

1. Third stage of labor.
2. Abortion and early accidents of pregnancy.
3. Prior to or during post-partum intrauterine instrumentation or manipulation.

Possible Indication:

1. During the second stage of certain carefully selected cases of primary uterine inertia.

THE WOMEN'S FIELD ARMY IN KANSAS

The Kansas Division of the Women's Field Army has just completed its third and most successful year. To the Field Army must go the major part of the credit for reduction in mortality in Kansas from cancer of the skin and buccal cavity. During the past year, well over two hundred meetings have been held throughout the state at which representatives of our county medical societies have presented programs on cancer. Skin cancer has received the major emphasis the past year. This next year, the Women's Field Army and the Committee on Control of Cancer have elected to stress the subjects of cancer of the breast and cancer of the uterus.

Few realize the extent of the organization of the Women's Field army. The work in each state must be done in cooperation with or under the supervision of the Cancer Committee of the State Medical Society. This is accomplished by having the Cancer Committee represented on the Executive Committee. This year all the members of the Committee on Control of Cancer of The Kansas Medical Society

have been made members of the Executive Committee of the Women's Field Army. The Executive Committee in Kansas also includes Mrs. Donald Muir, the State Commander, Mrs. E. F. Goernandt and Mrs. C. D. Kosar, the two Deputy Commanders, Mrs. R. H. Turner, President of the State Federation of Women's Clubs, Miss Georgiana Smurthwaite, State Home Demonstration Leader, Manhattan, Mrs. Ada Montgomery, Topeka, Dr. H. R. Ross, of the State Board of Health, Dr. Harry House, President of the Kansas Dental Association, and Mr. P. O. Herold, the Treasurer.

The Executive Committee serves as the governing body. The field work is all done by or under the direction of the State Commander. The state is divided into districts to correspond with the districts of The Kansas Medical Society, and in each there is a vice commander. Under each vice commander are county captains and nearly all of the counties in the state have been organized this year. Under each county captain, of course, are many workers so that the actual organization of the Women's Field Army itself embraces a large number of women all of whom become intensely interested in the cancer problem.

During the past year officers and members of the county medical societies have been very good in cooperating with the local units of the Field Army. This commendable attitude should be continued, and every effort made to provide good programs for whatever meetings the Field Army may arrange.

Financial support of the Women's Field Army has been rather feeble. An enlistment campaign is held each April, and the funds raised at this time make possible the campaign for the next year. All doctors should give their unqualified approval to the work of the Women's Field Army and encourage their friends and patients to join the organization.

Fig. 1. Colposcope and speculum.

Fig. 2. Badly lacerated cervix. Many nabothian cysts. Very suspicious area of epithelium at arrow.

Fig. 3. Same cervix with Schiller test. Note area of abnormal tissue that does not take the stain.

CANCER CONTROL

EARLY DIAGNOSIS OF CARCINOMA OF THE CERVIX

Howard C. Clark, M.D.

Wichita, Kansas

The mortality rate of carcinoma of the cervix has not been reduced, in spite of our improved methods of treatment. In 1931 Kansas lost 1,853 people from carcinoma and in 1939 these deaths from carcinoma were 2,000, and about 300 deaths were due to carcinoma of the cervix. It has been estimated that many of these could have been prevented if diagnosed and given standard treatment in the early stage or grade one.

Since the etiology of malignancy is obscure it is necessary to diagnose and institute treatment in the early stage of carcinoma to obtain good results. It has been agreed by clinicians that carcinoma does not develop in normal tissue. There is no proof that infection or trauma cause malignancy of the cervix. Carcinoma has been found in lacerated cervixes and also in nullipara cervixes. There must be an early picture of carcinoma or, so-called, pre-



FIG. 1

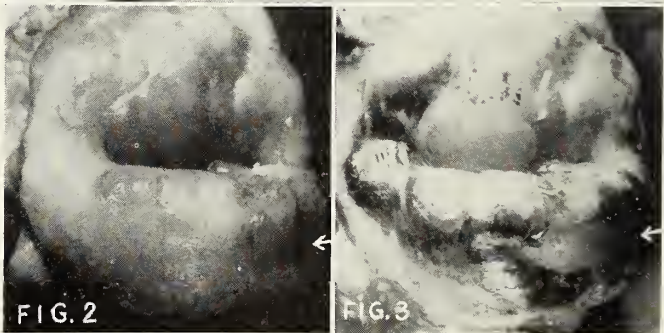


FIG. 2

FIG. 3



FIG. 4

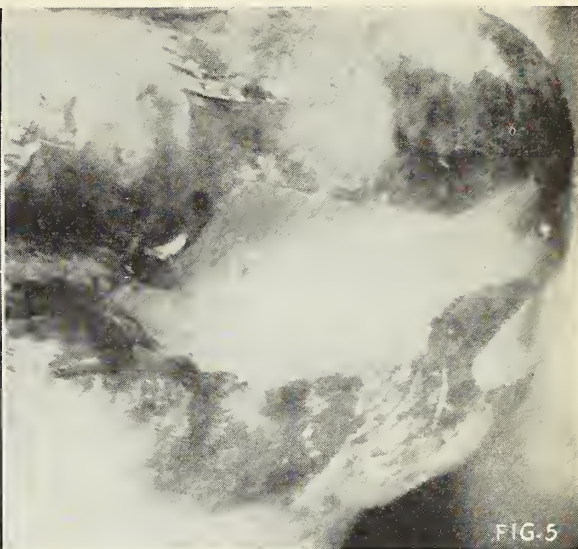


FIG. 5

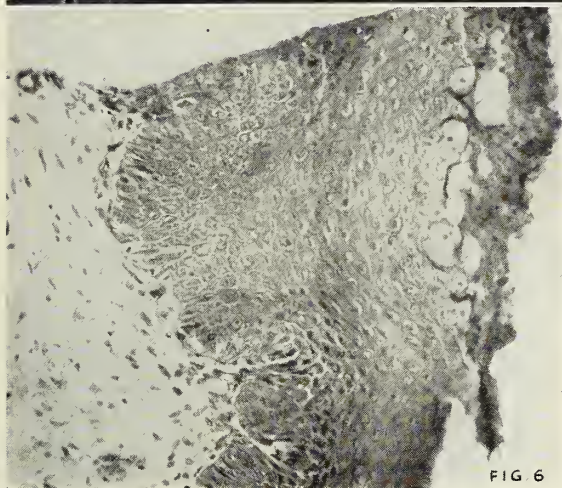


FIG. 6

Fig. 4. Same cervix using the colposcope. Note improvement over naked eye. Arrow points to area of suspicious epithelium.

Fig. 5. Same cervix with Schiller test viewed through the colposcope. Note area for biopsy.

Fig. 6. Leukoplakia. No area of invasion.

cancerous lesion. The initial lesion surely is not the typical histological picture we know and one which is taught in pathology classes today. Neither can we say that leukoplakia or hyperkeratosis is precancerous or malignant until the growth shows malignant changes.

Martzloff defines beginning cancer as an incipient stage where the cells of stratified epithelium in a localized area possess all the histological earmarks of carcinoma but lack the property of invasion. It is impossible to say whether such a lesion will progress to full blown malignancy or regress to normal tissue.

Early carcinoma is symptomless. When the patient comes in with symptoms this does not mean an early diagnosis, but a well advanced malignant growth. Dr. C. Jeff Miller taught that the classical picture of carcinoma of the uterus; leukorrhea, spotting, and pain are not symptoms of carcinoma of the cervix but symptoms of death. After the lesion

is visible and palpable it is incurable, in a majority of cases.

Women will have to be examined routinely and each erosion, ulcer or nodule thoroughly investigated. In reviewing the literature most clinics report seventy to ninety per cent cure when the carcinoma is diagnosed in the first stage or in the symptomless stage.

In the routine examination, a suspicious cervix should be thoroughly examined by the Schiller test, colposcope, and biopsy. The Schiller test is inexpensive and requires but a few minutes of the practitioners and pathologist's time and yet it is a specific test for absence of early carcinoma. With the cervix exposed Grams solution (iodine, pot iodine 2, water 300) is sprayed on the surface and vault of the vagina. The test is based on the discovery of Lahm that the upper layers of the normal epithelium, of the portio and vagina contain much glycogen. The glycogen disappears when the epithelium becomes cornified or changed by carcinoma.

In normal living tissue the glycogen of the upper cells is stained in a few seconds to a deep mahogany brown by the solution of iodine; a superficial area of early cancer being devoid of glycogen does not receive the stain and stands out white or light pink. The test is not altogether specific. There are five conditions in which glycogen is absent from the cells so that unstained areas remain thus:

1. A recently healed area of inflammation does not stain. Mucus, water, blood and pus stain black.

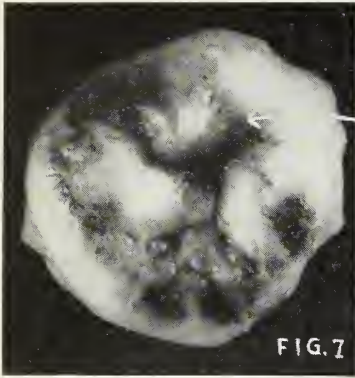


Fig. 7. Suspicious cervix as visualized by naked eye.

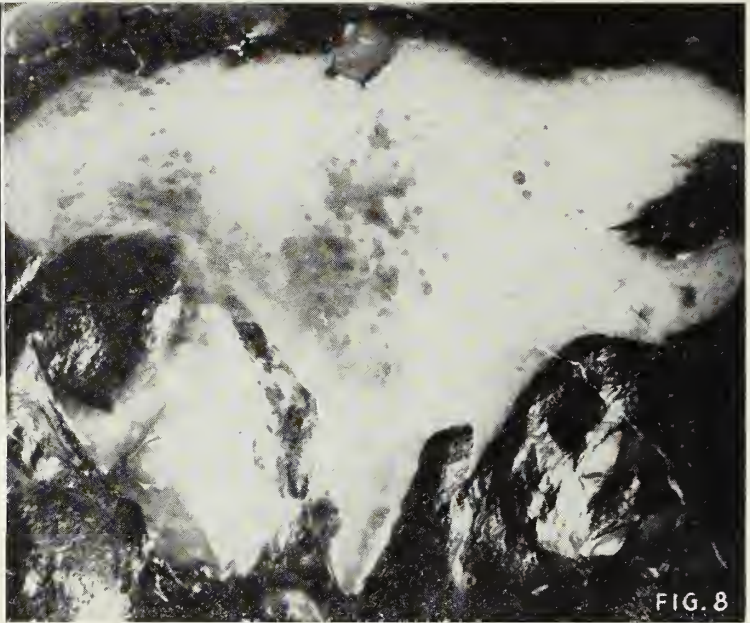


Fig. 8. Same cervix visualized through colposcope with Schiller test. Shows best location for biopsy.

If a negative reaction, it is gratifying to conclude that malignancy is absent.

2. Desquamation of the surface epithelium due to injury or trauma.

3. Ulceration or erosion which have lost their epithelial covering.

4. Leucoplakia which may be a forerunner of early carcinoma or a sign of syphilis of the cervix in a few cases.

5. Carcinoma in the early stages.

In many cases the colposcope is a great advantage in diagnosing early carcinoma. It was devised by Hinselmann of Hamburg. It is a modified low power microscope on a standard or vaginal speculum. With this instrument it is possible to recognize the typical epithelium, not only after cornification has taken place, but also when only a few parakeratotic layers cover the surface. In many cases the vessels are visible. The cylindrical epithelium varies in color from a moderate to a deep red and with a magnification of ten the small papillae are visible and droplets of mucus are distinguished coming out of the glands; small patches of leukoplakia are visible and easily scraped off for pathological diagnosis. Frequently Schiller test aids the colposcopic picture.

The beginning nodule or ulcer is frequently an early stage in the development of carcinoma and demands a biopsy study by a capable pathologist. Biopsy weakness lies in the fact that the tissue may not be secured from the most suspicious area. Whereas one familiar with the modified colposcope and the Schiller test can easily locate the most suspicious area to be verified by biopsy. The chief objective is to differentiate altered epithelium from the normal because the surface epithelium is altered

long before malignant changes take place. Schiller's results are not startling but he did find positive carcinoma in two per cent of routine examinations.

J. A. McGlinn at Philadelphia General Hospital examines 200 women each Saturday and he found only one carcinoma of the cervix last year. However, he feels that routine examinations would save many women from carcinoma and that the security in his own mind that he is not overlooking early carcinoma is very gratifying to the physician.

In conclusion, I feel that the picture of carcinoma of the cervix is changing and that frequent colposcopic examinations will definitely lower the mortality rate.

EYE, EAR, NOSE & THROAT

REPORT OF A CASE OF LUDWIG'S ANGINA ARISING FROM TOOTH EXTRACTION

Lyle S. Powell, M.D.

R. L. Dunlap, M.D.

Lawrence, Kansas

HISTORY: The patient, R. L., a white male twenty-three years of age, had a left lower third molar extracted on September 14, 1939. Three days later his left jaw began to swell. On September 19, five days after the tooth was removed, R. L. was

first seen by us in consultation at his home. At that time he complaining of pain and swelling in the left jaw and neck and was experiencing great difficulty in breathing. The patient's respiratory efforts were labored, at times stridulous.

EXAMINATION: External inspection revealed marked swelling and tenderness over the left jaw and submandibular portion of the neck. The swelling was confined to the left side of the neck and had not crossed the midline. Palpation of the swell-

**THE
TEMPERATURE
IS NOW..**

72°

**...in the Muehlebach's
7 Floors of Air-Cooled
and Sound-Proof Guest Rooms,
Three Famous Dining Rooms and
All Public and Meeting Rooms**

HOTEL MUEHLEBACH

Barney L. Allis, Pres.
KANSAS CITY, MISSOURI

ing produced no point of fluctuation but the area of greatest tenderness occurred beneath the angle of the left jaw.

Examination of the mouth was difficult due to the elevation of the tongue from swelling beneath it. The alveolar wound looked clean.

Mirror examination of the larynx was very difficult but revealed a marked edema of the glottis. However, passage of air was still possible under great effort.

TREATMENT: The patient was hospitalized immediately. Upon admission his temperature was 102 degrees axillary, and his pulse 100. The urine examination was negative. Blood count upon admission was as follows: hemoglobin 97 per cent, red blood cells 4,760,000, white blood cells 22,400, polymorphs ninety-one per cent.

Neoprontysil, ten c.c. every four hours, and ice packs were administered to the swelling. A tracheotomy set was kept in readiness and surgical drainage advised. Consultation confirmed this advice.

OPERATION: Six hours later the patient was operated. Under local novocaine one per cent solution, an horizontal incision was made through the skin and subcutaneous tissues over the swelling at the angle of the left jaw. Using blunt dissection, the tissues were separated until the gloved finger entered the floor of the mouth. A second vertical incision was made in the midline equidistant from the mandibular symphysis and the thyroid cartilage of the larynx. Blunt dissection was carried down to the trachea and the pre-tracheal layer of fascia incised. Using gloved finger and scalpel handle, blunt dissection was carried from the incision to the floor of the mouth where about one drachm of foul pus was evacuated great care was used not to actually enter the oral cavity with the dissections. The same method carried the dissection lateralward until a through and through Penrose drain was passed from one incision to the other. A heavy absorbent dressing was applied and the patient placed in semi-sitting position in bed. His dyspnea was immediately relieved. Smears showed short chain streptococcus.

A 500 cubic centimeter blood transfusion was given. Sulfanilamide, grains eighty per day, was administered by mouth. A liquid diet was well tolerated.

PROGRESS: On the following morning, the patient appeared much improved. His respirations were normal. Pulse and temperature, however, remained elevated.

At ten p.m. the same night, two drachms of purulent material were evacuated into the mouth from an opening on the lingual surface of left jaw beneath the third molar socket.

A second transfusion was given, this one of 250 cubic centimeters of blood. The pulse and tempera-

ture were reaching normal limits.

Four days after operation, the dressings were removed and the drain shortened. Copious drainage followed, necessitating repeated changes in dressings. The drain was shortened approximately one inch each day until removed on the seventh post operative day.

A ten days post operative blood count found the hemoglobin ninety-seven per cent, red blood cells 4,900,000 and while blood cells 7,000. The patient was dismissed to his home and dressed at the office. His wounds healed uneventfully and school activities were resumed eighteen days after operation.

DISCUSSION: We feel that this case demonstrates the necessity of early recognition and treatment of cellulitis of the floor of the mouth and submaxillary regions. Jackson-Coates¹ consider such cases to have a high mortality, especially if treatment is not instituted early. They recommend early incision through the submaxillary swelling, using local anesthesia. Mortality quoted is about fifty per cent. DaCosta² holds the same opinions as to mortality. The disease arises from oral sepsis, most commonly streptococcal. Dental infection travels via the lymphatics to the floor of the mouth and submaxillary region. He advises "operate promptly and incise freely." Coakley³ concurs with early surgical intervention. The chief dangers are mediastinitis from a descending infection along the fascial planes of the neck, and pneumonia.

BIBLIOGRAPHY

1. Jackson-Coates, The Nose Throat and Ear and Their Diseases, W. B. Saunders Company, Philadelphia 1929, 239, 240.
2. DaCosta, John Chalmers Modern Surgery, W. B. Saunders Company, Philadelphia 1921, 8:199-200.
3. Coakley, Cornelius G. Diseases of Nose and Throat, Lea & Febiger, New York and Philadelphia 1922, 6:365-368.

NEWS NOTES

COMMITTEES

Dr. F. L. Loveland, President, has announced the following new committees for the year 1940-41:

ALLIED GROUPS TO MEDICAL PRACTICE

George E. Milbank, M.D., Chairman.....	Wichita
G. A. Finney, M.D.....	Topeka
W. E. Janes, M.D.....	Eureka
Geo. E. Paine, M.D.....	Hutchinson
J. L. Lattimore, M.D.....	Topeka
R. R. Melton, M.D.....	Marion
C. D. McKeown, M.D.....	Wichita
W. Y. Herrick, M.D.....	Wakeeney
T. P. Haslam, M.D.....	Council Grove

AUTOMOBILE ACCIDENTS

Orville R. Clark, M.D., Chairman.....	Topeka
F. P. Helm, M.D.....	Topeka
H. P. Palmer, M.D.....	Scott City
H. P. Jones, M.D.....	Lawrence

In a SPIRIT OF
PATRIOTIC DEVOTION
 Kansas offers its
ABUNDANT RESOURCES
 toward the program of
NATIONAL DEFENSE:

KANSAS *is the* NATURAL SPOT for NATIONAL SECURITY!

Of all forty-eight states, Kansas is the natural choice for the location of national defense supply and equipment factories.

In Kansas, these plants will be (1) safely inland, (2) close to ample raw materials, (3) served by modern transportation, (4) in the midst of adequate loyal labor, and (5) near abundant basic foodstuffs.

Only Kansas offers ALL these advantages—because Kansas is:

1. Exactly in the geographical center of the nation.
2. 1st in VOLCANIC ASH production.
 1st in deposit of native CHALK.
 2nd in GRAIN SORGHUMS.
 3rd in SALT production.
 3rd in CHAT production.
 3rd in ZINC output.
 8th in MINERAL production.
 10th in CEMENT output.
3. Served by 9,000 miles of RAILROADS.
 Served by over 9,000 miles of STATE HIGHWAYS bisected by the largest number of U. S. HIGHWAYS.

4. Supplied with an abundance of loyal, intelligent, American-born LABOR.

1st in PER CAPITA WEALTH.

1st in COLLEGE STUDENTS per 1,000 persons.

4th in percentage of HIGH SCHOOL STUDENTS.

5. 1st in WHEAT, WHEAT STORAGE and FLOUR MILLING.

1st in the shipment of EGGS.

2nd in ALFALFA.

2nd in CREAMERIES.

4th in MEAT packing.

5th in DRESSED POULTRY shipped.

In addition to these outstanding definite advantages, Kansas also has a sound, co-operative, business-like administration of state government. And this state government pledges itself to cooperate fully in whatever measures are necessary to assure the continued security of the United States.

Only KANSAS offers ALL these advantages for American security

Roy H. Moser, M.D.	Holton
F. A. Moorehead, M.D.	Neodesha
E. A. Smiley, M.D.	Junction City
Hector Morrison, M.D.	Smith Center
Fred G. Schenck, M.D.	Burlingame

AUXILIARY

C. Omer West, M.D., Chairman	Kansas City
L. B. Gloyne, M.D.	Kansas City
L. A. Proctor, M.D.	Parsons
F. E. Coffey, M.D.	Hays
J. S. Reifsneider, M.D.	Wichita
J. J. Brownlee, M.D.	Hutchinson
H. H. Woods, M.D.	Topeka
C. C. Nesselrode, M.D.	Kansas City
A. C. Dingus, M.D.	Yates Center

CONTROL OF CANCER

H. E. Snyder, M.D., Chairman	Winfield
C. A. Hellwig, M.D.	Wichita
J. S. Hibbard, M.D.	Wichita
M. B. Miller, M.D.	Topeka
Lewis G. Allen, M.D.	Kansas City
C. D. Blake, M.D.	Hays
F. R. Croson, M.D.	Clay Center
M. Trueheart, M.D.	Sterling
C. C. Nesselrode, M.D.	Kansas City
Karl E. Voldeng, M.D.	Wellington
A. K. Owen, M.D.	Topeka

CHILD WELFARE

B. I. Krehbiel, M.D., Chairman	Topeka
Paul C. Carson, M.D.	Wichita
Paul E. Belknap, M.D.	Topeka
Earl G. Padfield, M.D.	Salina
J. A. Wheeler, M.D.	Newton
D. M. Medearis, M.D.	Kansas City
R. F. Boyd, M.D.	Topeka
F. L. Menahan, M.D.	Wichita
T. J. Brown, M.D.	Hoisington

CONSTITUTION AND RULES

A. W. Fegty, M.D., Chairman	Wichita
R. T. Nichols, M.D.	Hiawatha
J. E. Henshall, M.D.	Osborne
H. E. Haskins, M.D.	Kingman
C. M. Nelson, M.D.	Oberlin

ENDOWMENT

H. L. Chambers, M.D., Chairman	Lawrence
F. C. Boggs, M.D.	Topeka
E. S. Edgerton, M.D.	Wichita
J. L. Grove, M.D.	Newton
P. A. Pettit, M.D.	Paola
J. T. Reid, M.D.	Iola
H. O. Bullock, M.D.	Independence
Earl L. Vermillion, M.D.	Salina
J. L. Jenson, M.D.	Colby

CONSERVATION OF EYESIGHT

Lyle S. Powell, M.D., Chairman	Lawrence
W. M. Scales, M.D.	Hutchinson
George Gsell, M.D.	Wichita
J. G. Janney, M.D.	Dodge City
H. L. Kirkpatrick, M.D.	Topeka
H. W. Powers, M.D.	Topeka
John A. Billingsley, M.D.	Kansas City
C. J. Mullen, M.D.	Kansas City
R. E. Cheney, M.D.	Salina
W. W. Reed, M.D.	Topeka
W. D. Pitman, M.D.	Pratt

STUDY OF HEART DISEASE

Philip W. Morgan, M.D., Chairman	Emporia
Maurice Snyder, M.D.	Salina

James G. Stewart, M.D.	Topeka
H. H. Jones, M.D.	Winfield
T. T. Holt, M.D.	Wichita
C. W. Erickson, M.D.	Pittsburg
W. H. Algie, M.D.	Kansas City
Porter M. Clark, M.D.	Independence
G. M. Edmonds, M.D.	Horton

HISTORY

L. B. Barney, M.D., Chairman	Kansas City
W. S. Lindsay, M.D.	Topeka
David E. Green, M.D.	Pleasanton
G. L. Kerley, M.D.	Topeka
F. S. Hawes, M.D.	Russell

HOSPITAL SURVEY

A. R. Hatcher, M.D., Chairman	Wellington
R. H. Kiene, M.D.	Concordia
C. E. Joss, M.D.	Topeka
M. F. Russell, M.D.	Great Bend
Cecil Snyder, M.D.	Winfield
L. C. Joslin, M.D.	Harper
C. R. Rombold, M.D.	Wichita
J. H. A. Peck, M.D.	St. Francis
R. E. Speirs, M.D.	Dodge City
Conrad M. Barnes, M.D.	Seneca
D. B. Parker, M.D.	Ransom

LOCATIONS

A. C. Armitage, M.D., Chairman	Kinsley
C. F. Young, M.D.	Fort Scott
W. R. Morton, M.D.	Green
O. W. Longwood, M.D.	Stafford
C. W. Inge, M.D.	Formoso
D. D. Vermillion, M.D.	Goodland
C. A. Gripkey, M.D.	Kansas City

MATERNAL WELFARE

Ray A. West, M.D., Chairman	Wichita
Porter D. Brown, M.D.	Salina
L. A. Calkins, M.D.	Kansas City
Howard C. Clark, M.D.	Wichita
C. O. Merideth, M.D.	Emporia
H. R. Ross, M.D.	Topeka
Letteer G. H. Lewis, M.D.	McPherson
M. D. McComas, M.D.	Courtland
Walter H. Weidling, M.D.	Topeka
F. L. DePew, M.D.	Howard
A. L. Hilbig, M.D.	Liberal

MEDICAL ECONOMICS

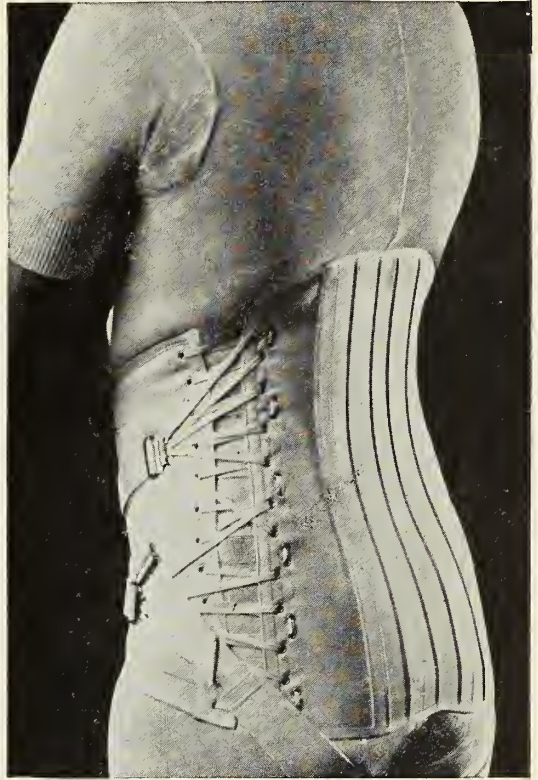
H. M. Glover, M.D., Chairman	Newton
I. R. Burket, M.D.	Ashland
W. R. Dillingham, M.D.	Salina
J. F. Gsell, M.D.	Wichita
B. A. Nelson, M.D.	Manhattan
A. J. Revell, M.D.	Pittsburg
R. G. Klein, M.D.	Dodge City
E. N. Robertson, Sr., M.D.	Concordia
F. E. Wrightman, M.D.	Sabetha
A. M. McDermott, M.D.	Ellis
A. C. Eitzen, M.D.	Hillsboro

MEDICAL SCHOOLS

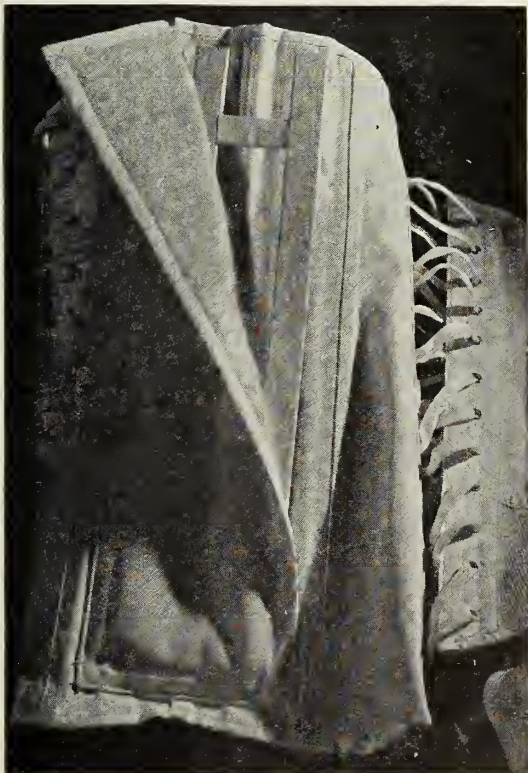
Fred J. McFwen, M.D., Chairman	Wichita
Fred E. Angle, M.D.	Kansas City
Justin A. Blount, M.D.	Larned
A. R. Chambers, M.D.	Iola
L. R. McGill, M.D.	Hoisington
L. F. Schuhmacher, M.D.	Dodge City
D. A. Bitzer, M.D.	Washington
L. J. Beyer, M.D.	Lyons
L. B. Spake, M.D.	Kansas City

SUPPORT WITH BRACE FOR THE LOW BACK

Commenting on the increased likelihood of patients with spondylolisthesis lesions to suffer from industrial low back injury and on the pathology and symptoms of such injuries, an orthopedic surgeon* in a recent article continues, as follows: "... one begins by putting the patient to bed for anywhere from a few days to two weeks. Physiotherapy is used to give relief from pain and to strengthen the muscles of the back. Sometimes it is well to assure rest to the injured back by immobilization in a plaster jacket. When the patient gets out of bed one must provide him with a low back belt if the symptoms have been mild, or with a spinal brace if rigid support is needed. If, in spite of prolonged conservative treatment, the pain and weakness in the back and the disability continue, one must realize that permanent internal fixation is required."



CAMP LUMBOSACRAL SUPPORT



CAMP SPINAL BRACE

The Camp spinal brace (illustrated) is made of spring steel and comes in varying lengths; twelve, fourteen, sixteen and eighteen inch lengths.

According to the surgeon's preference, the brace may be used to extend over the curved lumbar spine in a straight manner or may be fashioned to fit the curve of the spine.

The brace may be incorporated in any of the Camp side-lacing, orthopedic supports.

*Samuel Kleinberg, M.D.

New York State Journal of Medicine

Volume 39, September 15, 1939



CAMP
TRADE MARK
Supports



S. H. CAMP & COMPANY
JACKSON, MICHIGAN

Offices in: New York; Chicago; Windsor, Ont.; London, Eng.
World's largest manufacturers of surgical supports

NECROLOGY

J. H. O'Connell, M.D., Chsirman.....	Topeka
A. E. Gardner, M.D.....	Wichita
Henry Haerle, M.D.....	Marysville

PHARMACY

R. H. Moore, M.D., Chairman.....	Lansing
H. W. Duvall, M.D.....	Hutchinson
J. B. Ungles, M.D.....	Satanta
E. O. King, M.D.....	Herington
R. E. White, M.D.....	Garnett
W. H. Iliff, M.D.....	Baxter Springs
G. A. Leslie, M.D.....	McDonald

PUBLIC HEALTH AND EDUCATION

Earl L. Mills, M.D., Chairman.....	Wichita
Robert M. Carr, M.D.....	Junction City
J. N. Sherman, M.D.....	Chanute
C. T. Moran, M.D.....	Arkansas City
R. C. Jeffries, M.D.....	Archison
Robert Sohlberg, M.D.....	McPherson
D. R. Davis, M.D.....	Emporia
N. P. Sherwood, M.D.....	Lawrence
C. H. Munger, M.D.....	Emporia
C. C. Hawke, M.D.....	Winfield
H. C. Sartorius, M.D.....	Garden City

PUBLIC POLICY

E. C. Duncan, M.D., Chairman.....	Fredonia
Hugh A. Hope, M.D.....	Hunter
L. L. Bresette, M.D.....	Kansas City
J. F. Hassig, M.D.....	Kansas City
R. W. Urie, M.D.....	Parsons
R. G. Ball, M.D.....	Manhattan
C. A. Dieter, M.D.....	Harper
E. M. Ireland, M.D.....	Coats
Herbert Atkins, M.D.....	Pratt
W. F. Bernstorff, M.D.....	Winfield
R. W. Van Deventer, M.D.....	Wellington
J. B. Carter, M.D.....	Wilson

SCIENTIFIC WORK

John M. Porter, M.D., Chairman.....	Concordia
St. Clair O'Donnell, M.D.....	Ellsworth
R. M. Isenberger, M.D.....	Kansas City
Maurice A. Walker, M.D.....	Kansas City
Leslie L. Saylor, M.D.....	Topeka
J. D. Colt, Jr., M.D.....	Manhattan
R. I. Canuteson, M.D.....	Lawrence
T. P. Butcher, M.D.....	Emporia
E. M. Harms, M.D.....	Newton

STORMONT MEDICAL EIBRARY

L. M. Tomlinson, M.D., Chairman.....	Harveyville
J. M. Mott, M.D.....	Lawrence
Robert P. Knight, M.D.....	Topeka

TUBERCULOSIS

Henry N. Tihen, M.D., Chairman.....	Wichita
C. H. Lerrigo, M.D.....	Topeka
C. F. Taylor, M.D.....	Norton
F. A. Trump, M.D.....	Ottawa
N. C. Nash, M.D.....	Wichita
Omer M. Raines, M.D.....	Topeka
F. C. Beelman, M.D.....	Topeka
J. W. Spearing, M.D.....	Columbus
W. G. Reinhart, M.D.....	Pittsburg

VENEREAL DISEASE

Arthur D. Gray, M.D., Chairman.....	Topeka
G. E. Kassebaum, M.D.....	ElDorado
R. H. Reidel, M.D.....	Topeka
J. V. Van Cleve.....	Wichita
W. J. Singleton, M.D.....	LaCrosse
Harold E. Neptune, M.D.....	Salina

C. D. Updegraff, M.D.....	Greensburg
M. J. Renner, M.D.....	Goodland
W. L. Pratt, M.D.....	Leavenworth
George B. Morrison, M.D.....	Wichita
R. S. McKee, M.D.....	Leavenworth

NARCOTICS

The Collector of Internal Revenue has announced that in compliance with the recent opinion of the United States Circuit Court of Appeals on that subject, Kansas osteopaths will not henceforth be permitted to obtain narcotic stamps. Since all previously issued narcotic stamps expired on June 30, osteopaths in this state will not be permitted to "import, manufacture, produce, compound, sell, deals in, dispense or give away" narcotic drugs after that date. It is believed that Kansas members will be interested in the following editorial comment on this subject which was published in the July issue of the Journal of the Indiana State Medical Association:

"The United States Court of Appeals, Tenth District, has handed down a decision of far-reaching significance in the case of the Kansas State Osteopathic Association vs. W. H. Burke, Collector of Internal Revenue, State of Kansas. In this opinion the court held that osteopaths in Kansas cannot sell, use, or distribute narcotic drugs for any purpose. The case originally was filed in the United States District Court for the District of Kansas and the presiding judge held in favor of the osteopaths. An appeal was taken by the District Internal Revenue Collector and it was upon this hearing that the case was decided by the upper court. From a non-legal reading of the complete decision it would seem that the upper court held that the use of narcotics, under the Harrison Act, was limited to practising, registered *physicians*. The osteopathic group, declaring that they were *osteopathic physicians*, came under this classification. Excerpts from the ruling are of more than passing interest, as "osteopathy, when practised by a physician or surgeon, as is defined in section 65-1005, may be and probably is a part of the science of healing, but the practise of osteopathy, while it may be a part of healing, is not comprehended within the term 'practising medicine,' nor within the term 'surgical operation' as used in section 65-1005 of the Revised Statutes. Sections 65-1508 of the Revised Statutes, providing that nothing in the optometry act shall be construed as preventing regular registered physicians and surgeons from practising optometry, does not include those registered to practise osteopathy." Numerous similar comments are made throughout the rather lengthy and comprehensive decision, all making it very clear that osteopathy is just that, and nothing more. Just what effect this decision will have in other states, where regularly licensed osteopaths seemingly have little trouble in obtaining narcotics through the regular channels, remains to be seen. The decision appears, in full, in the April number of the Journal of the Kansas State Medical Society, page 176."

NEW LICENSEES

Ninety-three doctors of medicine were licensed by the Kansas State Board of Medical Registration and Examination to practice medicine and surgery in Kansas at a meeting of that Board held on June 18-19 in Kansas City, Kansas. The new licensees are as follows:

Arthur Adelman, Sylvia Allen, Glenn H. Baird, Winifred A. Blampin, John R. Barnhill, Fred D. Baty, Monti L. Belot, Louis John Bonanno, B. Earle Brickley, Vernon P.

The Patient With Mild Depression

THE patient with mild depression usually presents a clinical picture characterized by the following symptoms:

(1) apathy, discouragement and undue pessimism; (2) subjective difficulty in thinking, in concentrating and in initiating and accomplishing usual tasks; (3) subjective sensations of weakness and exhaustion; (4) hypochondria (undue preoccupation with vague somatic complaints such as palpitation or gastro-intestinal disorders which may have no organic basis).

If, in the judgment of the physician, such a patient will be benefited by a sense of increased energy, mental alertness and capacity for work, the administration of 'Benzedrine Sulfate Tablets', with their striking effect upon mood, will often accomplish the desired result. In favorable cases, the drug will also make the patient more accessible to the physician.

'Benzedrine Sulfate Tablets' should, however, be used only under the direct supervision of the physician, and their use by normal individuals to produce the above effects should not be permitted. In depressive psychopathic states the patient should be institutionalized.

Initial dosage should be small, $\frac{1}{4}$ to $\frac{1}{2}$ tablet (2.5 to 5 mg.). If there is no effect this should be increased progressively. "Normal Dosage" is from $\frac{1}{2}$ to 2 tablets (5 to 20 mg.) daily, administered in one or two doses before noon.



BENZEDRINE SULFATE TABLETS

Each 'Benzedrine Sulfate Tablet' contains amphetamine sulfate, S.K.F., 10 mg. (approximately $\frac{1}{6}$ gr.)



SMITH, KLINE & FRENCH LABORATORIES • PHILADELPHIA, PA.

EST.  1841

Brickey, Thomas S. Brownell, Norman A. Burkett, Howard C. Burkhead, Frank L. Bynum, Arthur S. Cain, Jr., Garland L. Campbell, Gilbert C. Campbell, James W. Campbell, Karl A. Catlin, Clayton W. Clark, Michael J. Clarke, Gordon C. Cook, Henry H. Crank, Robert L. Cushing, Donald R. Davis, Harold L. Dyer, Alfred G. Dietrich, Rutherford S. Duemler, DeMerle E. Eckart, Eugene K. Enna, Helen L. Finley, Bernard B. Gadwood, Norman A. Galitzki, Glen R. Garrett, James G. Gaume, George L. Gill, Karl B. Gonser, William H. Guthrie, Lawrence H. Hall, Glen S. Harman, Charles F. Henderson, Elmer A. Hof, August G. Hofferkamp, John A. Holmes, Addison C. Irby, Pratt Irby, John B. Jarrott, William A. Johnson, Ralph E. Jordan, Charles R. Kempthorne, Richard H. Lee, Paul B. Leffler, Paul H. Lohran, Herlan O. Loyd, Joseph W. Manley, Richard G. Meisburger, Morgan L. Mollohan, Victor R. Moorman, Joseph A. McDermott, George L. Norris, Max E. Puetze, Harold E. Poole, Marjorie M. Pyle, Dan O. Ratzloff, Rae A. Richeson, Forrest E. Richert, Harry Marshall Roach, David W. Robinson, Harold A. Rosier, Edward A. Samuelson, C. Robert Schmidt, Clayton L. Scuka, Ambrose B. Shields, Ronald A. Simpson, Clarence H. Steele, Marvin O. Steffen, Hugh Stephens, Daniel D. Stuart, Richard L. Sutherland, Charles D. Terry, Dean J. Tiller, Donald W. Todd, Newman V. Treger, Lester H. Ulrey, Ronald C. Vetter, Lawrence E. Vin Zant, William H. Walker, John D. Way, William E. Wendel, Claude S. Whitson, Robert B. Wilson, Walton C. Woods, Robert Paul Wright.

APPOINTMENTS

Governor Payne H. Ratner recently announced the re-appointment of Dr. F. L. Loveland, of Topeka, to the Medical Advisory Committee of the Norton Sanitarium for a four year term.

The other members of the committee are Dr. Hugh Hope, of Hunter; Dr. N. E. Melencamp, of Dodge City; and Dr. H. N. Tihen, of Wichita.

MINUTES

The following are the minutes of the recent meeting of the Committee on Control of Cancer held in Topeka on June 5, 1940:

The meeting was called to order in the middle of the afternoon following the adjournment of the Executive Committee of the Women's Field Army. Due to the absence of Mr. Munns, the minutes of the last meeting were not read. The chairman's report consisted in the showing of the exhibit used at the meeting of the State Medical Society in Wichita depicting the work of the Committee for the past year. Under the head of unfinished business, the cancer therapy survey was discussed. It was the feeling of the Committee that the therapy survey was fairly accurate as far as x-ray facilities were concerned. It was further noted that the radium centers listed, included all individuals or institutions owning radium in any quantity. It was suggested by Dr. Trueheart that another questionnaire be sent out concerning these cancer therapy facilities, and that an attempt be made to get more accurate information concerning electro-surgical equipment. Motion was made by Dr. Hibbard and seconded by Dr. Blake that another questionnaire be sent out to secure final data, and that as soon as we were sure the information was relatively correct, a map should be published in the Journal

of the Kansas Medical Society showing the location of these various cancer therapy facilities.

Under the heading of new business, the program for next year was considered. It was decided that, as a general rule, the subject of cancer of the breast and uterus should be used in public meetings next year. It was further decided that the film strips available from the American Society for the Control of Cancer on these subjects be used in the public meetings throughout the state. It was further decided that where ever possible the sound film "Choose to Live" should be shown at these meetings. It was decided that the Committee should prepare at least one set of lantern slides from the film strips to be used at large meetings where a large film strip projector is not available.

It was consensus of opinion that the same plan regarding selection of speakers for public meetings should be carried out next year, namely, that each county medical society should select the speakers for public meetings in their territory. It was further noted that when the Cancer Committee is called upon to furnish speakers, an effort will be made to furnish a speaker for that meeting who does not live in that immediate territory.

Next to be considered in the program for next year, was the question of the post-graduate course. The Committee was of the opinion that the post-graduate course on cancer should be continued, and the chairman was given instructions regarding the selection of the speaker or speakers for next year's program. It was the feeling of the Committee that a well-known individual should be selected to conduct this course.

It was further decided that each county medical society should be asked to hold at least one meeting on cancer during the next year. It was suggested that at these meetings the sound motion picture film, "Choose to Live" should be shown and also the two film strips on cancer of the breast and uterus which are to be used in public meetings next year. This program should be sponsored by the Cancer Committee of each county medical society and should include a talk by someone on that committee concerning the importance of the program of lay education in the control of cancer. The motion was made and seconded and carried that a bulletin should be sent to the secretary and president of each county medical society, suggesting this program.

A motion was made by Dr. Hibbard and seconded by Dr. Allen that an exhibit by the Committee on Control of Cancer of The Kansas Medical Society be shown at the A. M. A. meeting next year.

Next considered, in the program for next year, was the question of speakers on the subject of cancer at the state meeting. It was suggested by Dr. Voldeng that a forty-five to sixty minute symposium on cancer be presented at the state meeting and that this symposium be made up of ten or fifteen minute talks by members of The Kansas Medical Society and that this whole program be sponsored by the Committee on Control of Cancer. A motion was made by Dr. Voldeng to this effect, seconded by Dr. Allen, the motion was carried.

It was moved by Dr. Allen and seconded by Dr. Voldeng that the cancer section in the Journal be continued and material available for that section now, through additional articles prepared for the brochure on cancer, be used. The motion was carried.

A motion was made, seconded and carried that Dr.

There's Genuine Help for YOU

in These Three New Mosby Books

Walker - Elmer - Rose

PHYSICAL DIAGNOSIS

Revised by **HARRY WALKER, M.D., F.A.C.P.** Eighth Edition. 792 pages, 295 illustrations. **PRICE \$8.75.**

Here is a book which restores the art of physical diagnosis in medical practice. Emphasis is placed upon the recognition and diagnostic application of physical signs—those which can be felt, seen, or heard. Expensive laboratory aids to diagnosis are not necessary. You CAN make an accurate diagnosis with eyes that really see, fingers that really feel, ears that really hear.

This Eighth Edition discusses these physical signs clearly and practically. Both relevant and irrelevant signs are included and each assigned proper relative values. Clinical anatomy, pathology, and physiology are briefly reviewed to refresh your memory on these points before proceeding with the examination.

New features in the Eighth Edition include four new chapters, as follows: Chapter II—Recording the Physical Examination; Chapter XVIII—Percussion Sounds; Chapter XXXII—The Neuropsychiatric Examination—By Jas. Asa Shield, M.D., Richmond Va.; Chapter XLVII—Bronchoscopy, Esophagoscopy, and Gastrosocopy in the Diagnosis of Diseases of the Air Passages and Upper Gastrointestinal Tract—By Porter P. Vinson, B.S., M.D., D.Sc., Richmond, Va.

Chapter arrangement has been changed to conform to the usual order of the physical examination and subject matter has been brought up to date in the matter of general accepted present-day opinions. Comments on the physical findings of several clinical entities have been included for the first time and there have been many changes made in the illustrations.

APPLIED PHARMACOLOGY

This brand new text, written from the rich experience that comes with more than a third of a century of teaching pharmacology to medical students is the ideal text and reference work for every day use in daily medical practice. No matter what drug you may want to look up, you will find it here, together with an explanation of its action, its use, and its effects. The drugs are classified according to chemistry, pharmacy, and use on the various systems of the body. By **HUGH A. McGUIGAN.** 870 pages, 41 illustrations. Price, \$9.00.

COMPENDIUM of REGIONAL DIAGNOSIS in LESIONS of the BRAIN and SPINAL CORD—This popular accepted guide which deals with the principles underlying the localization of lesions in the central nervous system now appears in the 1940 Translation of the Eleventh German Edition. The text matter has been increased by almost 100 pages, and 23 more illustrations are included. Important additions to the illustrations are reproductions of x-rays which accompany the entirely new section on "Localization of Spinal and Cerebral Lesions by X-Ray." By **ROBERT BING** translated by **WEBB HAYMAKER.** 291 pages, 125 illustrations, 27 in color. Price, \$5.00.

The C. V. MOSBY COMPANY,
3525 Pine Blvd., St. Louis, Mo.

KMJ 7-40

Gentlemen: Send me the following book(s).....

.....

Dr.

Address.....

Hellwig be continued as editor of the Cancer Section of the Journal.

The question of future revision of the cancer brochure was then discussed. It was the feeling of the Committee that plans should be made immediately for revising this brochure within the next one or two years, and that it should be kept revised from year to year.

In discussing cancer mortality records in Kansas, the suggestion was made that this Committee should stress the importance of reporting living cancer cases and also reporting fatal cases to the Kansas State Board of Health. It was the feeling of the Committee that this matter should be stressed in all bulletins sent out by the Committee on Control of Cancer and it should also receive some attention in the Journal.

The motion was made and seconded that a joint committee from the Committee on Control of Cancer and the Executive Committee of the Women's Field Army meet with the State Board of Health at its next meeting and take up with them the problem of securing funds for financing the program on cancer control in Kansas next year.

CANCER INFORMATION

The Kansas State Board of Health has purchased two copies of the American Society for the Control of Cancer movie entitled "Choose to Live." The picture which presents lay information on the early recognition and cure of cancer is twenty-five minutes in length and requires a 15 mm. talking projector for showing. The Kansas State Board of Health will loan the movie to any county medical society which desires to use it.

The Kansas State Board of Health also recently received a new, electrically operated cancer educational exhibit, to be used, in co-operation with the Women's Field Army and the Kansas Medical Society, for education of the laity. The exhibit is colorful, attractive and effective, and will be viewed by thousands of Kansans attending the large state and county fairs this fall. Wherever practicable, the exhibit will also be made available for public meetings held in the interest of cancer education.

LOCATIONS

The Society Committee on Locations, of which Dr. A. C. Armitage of Kinsley is chairman, is now compiling a questionnaire survey and has assembled considerable other data on location possibilities in this state. The committee has also bulletinized most of the leading intern training centers in the country, that it will be glad to assist recent graduates, who are interested in locating in Kansas.

PHYSICIANS ASSISTANTS

The Topeka Physicians Assistants Society entertained on July 1 with a picnic for the physicians and their wives at Lake Shawnee. More than eighty-five guests and members of the organization were in attendance. Dr. Harry J. Davis, of Topeka, showed colored moving pictures of a recent trip to Mexico.

The Council of the state organization of Kansas Physicians Assistants Society met in Topeka on June 16. The Constitution was approved and a recommendation was made that it be adopted by the state organization at its next annual meeting.

KANSAS STATE BOARD OF HEALTH HOLDS ANNUAL MEETING

The Kansas State Board of Health held its annual meeting June 27, in the office of the Board in Topeka.

A committee composed of Dr. R. W. Urie, Dr. H. L. Aldrich, Mr. William E. Scott, Attorney, and Dr. F. P. Helm, reported on the meeting called by the U. S. Secretary of Labor, regarding health and working conditions in the Tri-State Mining Area.

A committee composed of the following board members, Mr. Scott, Dr. Urie, and Dr. J. F. Gsell, was appointed to work with the engineers of the state health department's division of sanitation, in making a survey of the badly plugged and unplugged old wells, especially in the Walnut River basin. This committee is empowered to consult the Governor, and to meet with other committees.

Dr. George I. Thacher was unanimously elected president of the Board of Health for the third successive term.

NEW YORK SESSION

Twelve-thousand eight hundred and sixty-four doctors attended the ninety-first annual session of the American Medical Association held in New York, June 10-14, 1940. The registration list included doctors from 46 states and the District of Columbia and was the largest ever to have attended a meeting of that organization.

The scientific program as usual was particularly complete and included papers, exhibits and other presentations in all fields of medicine.

Dr. Frank Howard Lahey, of Boston, was elected President-Elect to succeed Dr. Nathan B. Van Etter, of New York, who become President. Dr. Parke G. Smith, of Cincinnati, Ohio, was elected Vice-President. Dr. William F. Braasch, was elected to fill the vacancy on the Board of Trustees created by the death of Dr. Charles B. Wright. Dr. Ralph Fenton, of Portland, Oregon; and Dr. James R. Bloss of Huntington, West Virginia were re-elected as Trustees. Dr. Herman L. Kretschmer, of Chicago, as Treasurer; Dr. H. H. Shoulder, of Nashville, Tennessee, as Speaker of the House of Delegates; and Dr. Roy W. Fouts, of Omaha, Nebraska, as Vice-speaker of the House.

The 1940 Distinguished Service Award of the American Medical Association was given to Dr. Chevalier Jackson, of Philadelphia. As the American Medical Association selects its meeting place three years in advance, San Francisco was selected as the meeting place of the 1943 session. The meetings in 1941 and 1942 will be held in Cleveland and Atlantic City respectively.

Of foremost interest in the House of Delegates proceedings was the consideration of the question of procurement of personnel for the Medical Corps in event of a national emergency. The Surgeon General of the United States Army presented the following tentative plans in that subject for the consideration of the House of Delegates:

1. The American Medical Association to be asked to conduct a survey of the medical profession through its state and local activities.

2. The local or county societies to canvass its members to determine, of those who express a willingness to serve, who should be available for the military service and who, on account of their age, physical disability or commitment in civil capacities should remain at home.

3. The county society to give to each one who expresses his willingness to serve, even though he may be selected to remain at home, a button similar to that which was designed for the Volunteer Medical Service Corps during the last war.

Cigarette information worth knowing*

*Philip Morris do not claim to cure
irritation but they do say this:*

62.3%

of the cases of irritation of the nose
and throat due to smoking cleared
completely on changing to Philip
Morris.

37.7%

the balance, showed definite improve-
ment.

100% benefited

**From tests reported by Laryngoscope,
Feb. 1935. Vol. XLV, No. 2, 149-154*

PHILIP MORRIS & CO., LTD., INC., 119 FIFTH AVENUE, NEW YORK

4. The county societies to list those who are selected for the military service according to their professional qualifications, listing as surgeons, psychiatrists, and so on, only those who are members in the national specialists' organizations. Also to select from those who are to remain at home, qualified men for examination boards.

5. The state societies to maintain an available roster of its members.

6. The American Medical Association to maintain a numerical roster of availability by states.

7. The Medical Department of the Army to have one or more selected officers on duty at headquarters, American Medical Association, in Chicago.

8. The War Department, Corps Areas or regional officers to call on the American Medical Association for physicians or specialists as and when required.

9. The American Medical Association to call on the states, according to their quotas, for the physicians required.

10. The state, in turn, to call on its local societies for its quota of physicians.

In the quotas, credits would be given for sponsored unity, and preference would be given to reserve officers wherever their qualifications warrant.

It appears that, in the event of a national emergency of great magnitude, it would be very necessary to conserve the medical profession. This plan would distribute the professional load and, if properly administered, should prevent the stripping of rural and isolated communities of their necessary medical personnel.

There could be an extension of this plan to cover the training program for technicians. The same societies could conduct a survey of the teaching institutions.

The Reference Committee to which the matter was assigned then made the following report and recommendations which were adopted by the House of Delegates:

Your committee has carefully considered this resolution of Colonel Dunham's and is pleased to see such evidence of a desire for cooperation. We endorse the principles advocated but feel that the details should best be left to the committee established by the resolution of the Board of Trustees.

Your committee feels that in the choice of personnel every physician capable of rendering service be given opportunity to offer such services to our government and that in the selection of personnel for special services there be no arbitrary selection on the basis of organizations, or bodies thus far still in a development stage, but rather that membership in well recognized scientific specialty organizations, hospital appointments and similar qualifications be also considered for this purpose.

We therefore move that the thanks of the House be extended to Colonel Dunham and that the general principles of his resolution be endorsed.

Resolutions authorizing organization of a committee on medical preparedness. The Chairman of the Board requested the Secretary to read the following Resolutions Authorizing the Organization of a Committee on Medical

Preparedness, which were referred to the Reference Committee on Executive Session:

WHEREAS, The ravages of war again prevade many of the nations and peoples of the world; and

WHEREAS, The President of the United States has indicated to the nation and to the Congress the desirability of military preparedness so that our people may successfully resist attempts to substitute other forms of government for the democracy established by the Constitution of our country; and

WHEREAS, Organization of the nation for preparedness involves from the first complete cooperation of the physicians of the country for:

1. Medical services in the Military, Naval, Aviation and Veteran's administrations;

2. Selection of men physically fit to serve with such agencies; and

3. Rehabilitation of those not physically qualified (to enable them) to participate in military activities; and

WHEREAS, Preparedness demands also

1. Medical service to the industrial workers engaged in war industries;

2. Continuance of medical care of the civilian population;

3. Education of young men to qualify them for medical service; and

WHEREAS, The American Medical Association now embraces in its membership more than 117,000 of the licensed physicians of the United States; and

WHEREAS, The headquarters of the American Medical Association have available facilities as follows:

1. Complete records of all qualified physicians in this country, with data necessary to determine largely their availability for military or other services;

2. Complete information concerning facilities for education in medicine, the medical specialties and other medical activities;

3. Complete information concerning the hospitals of the United States;

4. The necessary facilities for making prompt contact through addressing devices, periodicals and constituent bodies with all medical personnel and medical agencies; and

WHEREAS, Only the headquarters of the American Medical Association, as far as is known, are such information and facilities available; and

WHEREAS, The American Medical Association is not only the largest but also the only organization containing in its membership qualified physicians in every field of medical practice; and

WHEREAS, During the World War of 1914-1918 the American Medical Association aided in making available the services of more than 60,000 physicians for military and related activities; therefore, be it

Resolved, That the House of Delegates authorize the Board of Trustees to create a Committee on Medical Preparedness, to consist of seven members of this House, with the President of the Association, the Secretary of the As-

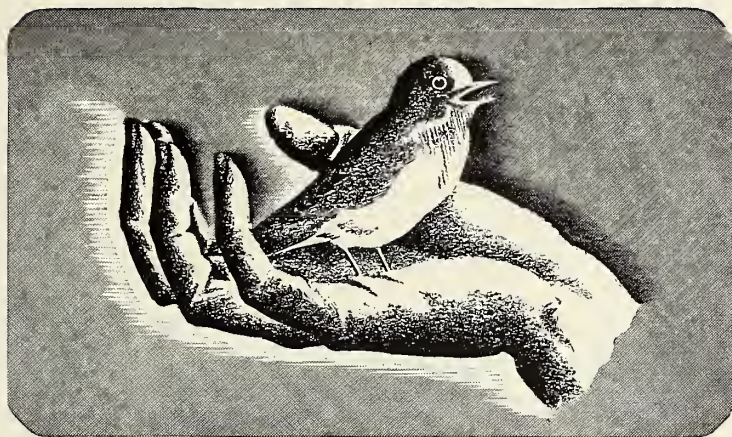
DEPENDABLE PRODUCTS *for* PHYSICIANS

Zemmer

PRESCRIBE OR DISPENSE ZEMMER

Pharmaceuticals, Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled. Write for general price list. *Chemists to the Medical Profession* KA 7-40

THE ZEMMER COMPANY, Oakland Station, Pittsburgh, Pa.



Research philosophy is different

The "bird in the hand" idea may often be sound policy. But research has a different philosophy. It is looking for the "two birds in the bush." The true scientist isn't content with what's already been done. He is deliberately searching into the unknown.

This philosophy has motivated many Parke-Davis contributions to modern medicine. For example—Adrenalin, Pituitrin, Pitocin and Pitressin, Mapharsen, Meningococcus Antitoxin. Each of these has enabled the physician to treat his patients more effectively, more safely, and with more confidence.

This philosophy constantly directs Parke-Davis research toward discovery and development of new and better therapeutic agents.

PARKE, DAVIS & COMPANY



PIONEERS IN RESEARCH ON MEDICINAL PRODUCTS

sociation, the Secretary of the Board of Trustees and the Editor as ex officio members; and be it further

Resolved, That this Committee establish and maintain contact and suitable relationship with all governmental agencies concerned with the prevention of disease and the care of the sick, in both civil and military aspects, so as to make available at the earliest possible moment every facility that the American Medical Association can offer for the health and safety of the American people and the maintenance of American democracy.

The House of Delegates also adopted the following resolution pertaining to public health laboratory service which is of special interest to Kansans by reason that the Kansas State Board of Health was one of the first states to adopt this policy:

WHEREAS, The continued growth and development of that special branch of medicine known as clinical pathology is necessary for the proper diagnosis and treatment of the sick and is essential to the science and practice of medicine; and

WHEREAS, The growth of laboratories of state boards of health has been abnormally augmented by grants-in-aid from the federal government, the effect of which is to extend these services to all citizens without regard to their ability to pay; and

WHEREAS, The excessive development of laboratory medicine by state boards of health serves as an entering wedge for state medical practice which apparently will include all medical specialties; and

WHEREAS, These practices will inevitably result in the curtailment of the practice of clinical pathology and tend to discourage young, well trained physicians from entering this essential field; be it therefore

Resolved. That the House of Delegates recommend to all state medical societies that they hold conferences with the authorities of their state boards of health with the view of limiting the type and extent of services offered by the laboratories of these organizations. Laboratory services by the state board of health laboratories should be confined to requests made by health officers and to those made by physicians whose patients find it difficult or impossible to pay the cost of laboratory services of this kind in the customary manner. In general, laboratories of the state boards of health should not provide services at taxpayers' expense to persons who are able to provide for themselves; and be it further

Resolved, That the House of Delegates authorize the Board of Trustees of the American Medical Association to undertake an educational campaign to set forth this problem to the medical profession.

Other resolutions adopted by the House of Delegates are as follows:

A resolution to appoint a committee on "conservation of eyesight" and encourage an educational program along this line.

A resolution pertaining to venereal disease control and providing for the extension of programs of this kind under the supervision of physicians.

A resolution approving the American Museum of Health at and urging the support of similar museums in other parts of the United States.

An amendment to the Constitution was approved by the House of Delegates in which provision is made that only doctors of medicine shall be eligible for membership in the Association. The amendment arose through the fact that one state society is following a policy of admitting cultists to membership.

A resolution, pertaining to the Wagner-George Bill, suggesting that hospitals should be constructed under the measure only in communities where need exists and where willingness to locally maintain the institution is demonstrated.

A resolution to defend the anti-trust charges now pending against the association.

A resolution reapportioning the delegates as is required every third year, and establishing representation on the basis of one delegate for every 930 members or fraction thereof, with the total membership of the House being 175.

Kansas members who registered at the meeting are as follows: Lewis Winston Angle, Kansas City; James H. Bena, Pittsburg; John A. Billingsley, Kansas City; M. L. Bishoff, Topeka; Porter Brown, Salina; William Brown, Paola; John D. Clark, Wichita; Porter M. Clark, Independence; Funston J. Eckdall, Emporia; E. S. Edgerton, Wichita; Clarence W. Erickson, Pittsburg; H. E. Haskins, Kingman; J. F. Hassig, Kansas City; J. L. Lattimore, Topeka; Forest L. Loveland, Topeka; H. C. Markham, Parsons; Sherwin E. Mella, Kansas City; Thos W. O'Brien, Fr. Riley; Lucien R. Pyle, Topeka; Louis S. Roberts, Wichita; C. E. Sanders, Kansas City; Howard L. Snyder, Winfield; Howard E. Snyder, Winfield; Charles Fletcher Taylor, Norton; and Mr. C. G. Munns, Topeka.

Dr. Hassig of Kansas City, served on the Committee on Distinguished Service Award and Dr. H. L. Snyder of Winfield, served on the Reference Committee on Miscellaneous Business.

MEMBERS

Dr. H. A. Gerbig, formerly of Wellington, has opened offices in Independence.

Dr. B. I. Krehbiel, of Topeka, was the speaker at a meeting of the Topeka Council of Parents and Teachers on June 5. Dr. Krehbiel's subject was "What the Association Can Do to Promote the Health of the Child."

Dr. R. C. Lowman, of Kansas City, was the honor guest, with Dr. Owen Krueger of Kansas City, Missouri, at a dinner given by the St. Margaret's hospital staff on May 29.

Phone
3-3261

The OVERTON ELECTRIC CO., Inc.

522
Jackson

Specializing in all forms of
FLUORESCENT LIGHTING.

Buy the finest HY-
GRADE LAMPS—
Look for the Red
Triangle.

AN ELECTRICAL SERVICE
THAT IS COMPLETE.

TOPEKA

S. D. THACHER, President

KANSAS

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago
Phone Randolph 8855



NEUROLOGICAL HOSPITAL

Twenty-Seventh and The Paseo
Kansas City, Missouri

Modern Hospitalization of
Nervous and Mental Ill-
nesses, Alcoholism and
Drug Addiction.

THE ROBINSON CLINIC

G. WILSE ROBINSON, M.D.
G. WILSE ROBINSON, JR., M.D.

SILVER PICRATE

Wyeth

HAS SHOWN A CONVINCING RECORD* OF
EFFECTIVENESS IN ACUTE ANTERIOR URETHRITIS
due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
Monilia albicans

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, *AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES*, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

The dinner was in honor of their fifty years of practice. Dr. George M. Gray, one of the founders of the hospital, who was honored several years ago in a similar manner, was an honor guest. Dr. J. F. Hassig, of Kansas City was the toastmaster.

Dr. D. C. McCarty of Axtell, was called to active duty in the Medical Reserve Corps of the Army on June 24.

Dr. Philip Morgan of Emporia was recently appointed as a member of the Committee on Activities of the American Heart Association.

Mr. W. G. Clugston's, of Topeka, new books *Rascals in Democracy*, which is receiving much national comment by reason of its unusual historical description of Kansas politics, is dedicated to Dr. R. B. Stewart of Topeka.

Dr. E. M. Seydell, of Wichita, was elected vice-president of the American Otolological Society at its annual meeting in Rye, New York, on May 30-31.

Dr. L. K. Thacher who has been associated with his father, Dr. George I. Thacher, in Waterville for the past two years left in June to supervise tuberculosis control in Santa Barbara, California.

COUNTY SOCIETIES

The Clay County Medical Society held a meeting June 5 in Clay Center. Dr. F. L. Loveland of Topeka was a speaker on the program.

The Franklin County Medical Society held a meeting on May 29 in Ottawa. Dr. I. H. Lockwood of Kansas City, Missouri, was the guest speaker.

The Golden-Belt Medical Society held a meeting on July 11 in Manhattan. Speakers were: Dr. Harry Davis of Topeka who spoke on "X-Ray Diagnosis of Placenta Praevia" and Dr. George K. Fenn, assistant professor of Medicine, Northwestern University Medical School, of Chicago, Illinois, who spoke of "The Therapeutics of Coronary Disease."

The Johnson County Medical Society and Auxiliary held a picnic supper in Overland Park at the home of Dr. and Mrs. Fred Irwig on June 7.

The Montgomery County Medical Society held a meeting at Independence on May 24.

The Nemaha County Medical Society held a meeting in Sabetha on May 21 at which the members of Brown and Marshall counties and Richardson county, Nebraska, were guests. Speakers were Dr. Earl Padgett of Kansas City, Missouri; Dr. Ferdinand Helwig of Kansas City, Missouri; and Dr. J. E. M. Thompson of Lincoln, Nebraska.

The Shawnee County Medical Society held its annual golf tournament at the Topeka Country Club on June 6, with the members of the Topeka Dental Society as their guests.

The Washington County Medical Society held a regular meeting on May 21 in Washington.

DEATH NOTICES

Dr. James W. Ryan, 79 years of age, formerly of Coffeyville, died June 8 in Dallas, Texas, following several months illness. Dr. Ryan was born April 11, 1861, at Cincinnati, Ohio, and was graduated from the Medical College of Ohio, in Cincinnati in 1888 at which time he came to Coffeyville. Dr. Ryan was a former member of the Kansas Medical Society and in 1901 was elected as its vice-president.

BOOK REVIEWS

PROCTOLOGY FOR THE GENERAL PRACTITIONER—Frederick C. Smith, M.D., M.Sc., F.A.P.S. Three hundred eighty-five pages and one hundred and forty-five illustrations. Publishers F. A. Davis Company, Philadelphia.

A well-written book intended to acquaint the general practitioner with the common proctologic pathologies and to interest him in their early diagnosis. This book is easily read and does not dwell long on points not of use in every day practice. Rectal complaints of varied ano-rectal pathologies are taken up in orderly fashion in the opening chapter which is well presented to introduce the reader to the subject. An excellent chapter is devoted to the overlapping of subjective symptoms resulting from either urologic, gynecologic, or proctologic pathology.

In the chapter on anesthesia several pages are devoted to the use of diothane as a prolonged local anesthesia and is highly regarded by the author. The question of surgery or injection for internal hemorrhoids is well answered in the chapter devoted to that common anorectal finding. An important point in the chapter on hemorrhoids is that stenosis is usually not the result of too radical surgery, but of surgery in the presence of too active infection.

Prolapse and proctidentia are well defined and differentiated with their treatment given. Pruritus ani, colitis, dysentery, tuberculosis, abscesses, fistula etc. are all well covered in this brief, to the point, practical book.—L. A. S.

NEW BOOKS RECEIVED

THE NEW INTERNATIONAL CLINICS—Edited by George Morris Piersol, M.D. Volume II, New Series Three. Published by J. B. Lippincott Company, Philadelphia, Pa., 1940.

THE ARNOLD DRUG COMPANY

523 KANSAS AVENUE

TOPEKA, KANSAS

For 71 years we have serviced the Medical Profession. We pride ourselves with having the most complete stock of nationally advertised merchandise, featuring Eli Lilly Products exclusively. We sincerely appreciate the fine way that you have treated our store.

Thank You

GEORGE RALSTON

Karo in Infant Diarrhea

1. *Diminishing Diarrhea*

KARO prevents the flooding of the intestinal tract with excessive amounts of easily fermentable sugars because the dextrose and maltose components are quickly absorbed and the difficultly fermentable dextrin is gradually transformed into monosaccharides.

2. *Treating an Attack*

KARO may be added in suitable amounts to acidified, skimmed or evaporated milk without any tendency for fluid to be drawn into the intestines or be increased in the stools.

3. *Feeding in Convalescence*

KARO is gradually increased in the formula, according to individual indications, in order to provide the high energy requirement necessary to combat exhaustion. KARO is well tolerated, easily digested and non-irritating to the intestinal tract.



IN HIGH CALORIC DIETS

your patients will appreciate knowing the many ways in which Karo can be served. We will send to physicians copies of "49 Delightful Ways to Enjoy Karo"—please specify the quantity you require... Address

CORN PRODUCTS SALES COMPANY
17 BATTERY PLACE • NEW YORK CITY

A MANUAL OF THE COMMON CONTAGIOUS DISEASES—P. M. Stimson, M.D., Third edition, published by Lea & Febiger, Philadelphia, Pa. Price \$4.00, 1940.

ESSENTIALS OF THE DIAGNOSTIC EXAMINATION—John B. Youngmans, M. D. Published by the Commonwealth Fund, New York, 1940. Price \$3.00.

MANUAL OF DERMATOLOGY—Carroll S. Wright, M.D. Published by the Blakiston Company, Philadelphia, Pa.

AUXILIARY

PRESIDENT'S MESSAGE

Thursday, May 13, in the parlor of the Pennsylvania Hotel, New York City, I heard these words: "Service to Humanity," the 1940 theme of the Woman's Auxiliary to the A. M. A.

To live our theme at this critical time is going to be a difficult task for with each turn of the dial we are faced with even graver news than the hour before. The plans whereby we serve humanity were brought to the Auxiliary in addresses by Dr. Rock Sleyster the retiring A. M. A. president and Dr. N. B. Van Etten, the incoming president, and discussions throughout the National Auxiliary meeting.

We were told that the 117,000 doctors of the United States and the 23,003 Auxiliary members were mobilized for voluntary service.

Watch this page and as soon as I have time to get my thoughts and help organized I shall pass on the suggestions made at the meeting.

The minutes of the National Auxiliary meeting may not reach us until fall, Mrs. Packard told us, due to the fact they are printed at the A. M. A. office when time permits.

Mrs. V. C. Holcombe, Charleston, West Virginia, our new President will send us the names of the National officers and chairmen and their addresses very soon.

You'll be happy to know that Mrs. R. E. Mosiman, Seattle, Washington, is President-elect. She is not only capable but lovable. The delegates were pleased to have a President-elect from Washington for only two National Presidents have come from the west. Dr. Van Etten said her work as Public Relations Chairman was a master piece and he only wished the A. M. A. had as good a chairman.

It was voted to make Mrs. S. C. Red, Huston, Texas, the

FOR SALE—Complete office equipment for Eye, Ear, Nose and Throat of the late J. Frank McNaught, M.D., Girard, Kansas. Description and prices on request. Mrs. Ethel McNaught, Girard, Kansas.

WANTED—Resident doctor, village and rural practice at Alden in Central Kansas; partially equipped office of late Dr. David T. Muir for rent; good roads; pleasant community; large territory; expenses small; hospitals eight and fourteen miles. Write or call Mrs. D. T. Muir, Alden, Kansas.

THE STOKES HOSPITAL

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Med. Dir.

923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102



THE W. E. ISLE CO.

1121 Grand Avenue
Kansas City, Mo.

ISLE-BUILT LIMBS
ORTHOPAEDIC
APPLIANCES
SURGICAL SUPPORTS

CAPABLE FITTERS

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM
Ralph Emerson Duncan, M.D.

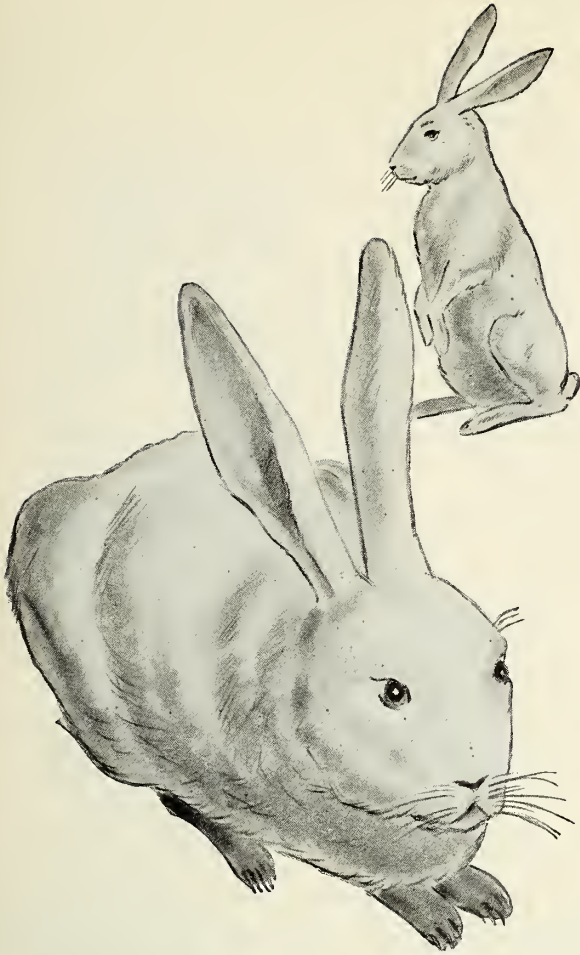
Director

529 Highland Ave.

Kansas City, Mo.

Telephone—VIctor 4850

Registered by the Council on Medical Education and Hospitals of the
A.M.A.



RABBITS *and* RAGWEED

Rabbits may look alike, but when used to produce antipneumococcic serum the titre may differ widely from animal to animal. Likewise, two lots of ragweed (or any other pollen) may be identical weight for weight, yet differ in content of active principle.

To assure uniformity of activity from lot to lot and season to season, the Squibb Laboratories use the *protein nitrogen unit* to express the content of active principle in their pollen extracts. This unit has been shown by Cooke and Stull¹ to be a very close measure of allergenic activity.

All Squibb Pollen Extracts are glycerol solutions and retain their potency for more than 18 months. They are available in a variety of dosage forms to suit the needs of individual patients.

Use *Ragweeds Combined* for late Summer and early Fall Hay Fever. "Ragweeds Combined" Squibb Pollen Extract contains equal parts of giant and dwarf ragweed.

¹ Cooke, R. A., and Stull, A.: *J. Allergy* 4:87, 1933 and previous papers.

"Ragweeds Combined" Available in These Convenient, Economical Packages

Package	Contents	Total Protein Nitrogen units Supplied	Advantages
Three-Vial Package	Three—3.5-cc. vials—containing 100, 1000, and 10,000 protein nitrogen units per cc. respectively.	38,850	1—Convenience—no diluting or mixing necessary. 2—Economy—enough material for from 15 to 19 doses for one patient. 3—Flexibility of dosage—dosage may be adjusted to suit individual requirements.
5-cc. Vials	One 5-cc. vial supplying 10,000 protein nitrogen units per cc.	50,000	Most economical when used with the Special Diluent Package of 2 x 9 cc. vials of sterile 50% Glycerin solution. In a few minutes you can easily prepare enough material for 15 doses for two patients.
15-Dose Treatment Set	15 vials in graded doses plus 15 vials of diluent .	17,040	Each dose is pre-measured, ready for injection after mixing with diluent.

We also offer a large variety of Squibb Pollen Extracts in 5-cc. vials for treatment and in capillary tubes for diagnosis.

For literature address the Professional Service Department, E. R. Squibb & Sons, 745 Fifth Avenue, New York, N. Y.

SQUIBB POLLEN EXTRACTS

first National Auxiliary President, an honorary member.

Fourteen thousand doctors and 1,300 Auxiliary members were present, sixty-six new Auxiliaries were organized this year, Indiana having fifteen of these.

Our printed annual reports for Kansas created much interest and several state Presidents asked for copies and I'm mailing these. The state President's reports are to be printed next year for the National meeting and they will give verbally a two minute report of outstanding and new accomplishments of their state.

We were royally entertained by the women of New York State, from the Tea at Sherry's the first day, until the "Bring your Husband Dinner" and Ball at the Waldorf-Astoria the fifth day. This was not easily accomplished as New York City has no Auxiliary and the committees on arrangements were from the four corners of the state.

Dr. Van Etten expressed himself in favor of having the medical course cut two years.

Mayor F. H. La Gardia in his welcome at the opening meeting of the A. M. A., where the Auxiliary members were invited, said the government has lagged behind medicine. He traced the care of a child from before birth to high school age and said—"Then the government doesn't know what to do with it." He added that he hoped the doctors could solve their problems themselves.

A resolution was introduced by the A. M. A. expressing their appreciation of the action of the United States Senate in establishing "Doctor's Day" June 22.

Our attention was called to the advertisement to be published by the National Physicians Committee in the Saturday Evening Post, June 22 and July 13 at the cost of \$23,000 each. This is merely one more step in the nationwide educational program. Mr. John M. Pratt, executive

administrator of this committee is the author of the booklet "Priceless Heritage" which gives an excellent picture of what free and independent medical practice has accomplished. Mr. Pratt said that wives of doctors and mothers of sons who are doctors can be the most important influence to bring the American public to understand the meaning of progress of American Medicine and the importance of free and independent medical practice.

Ten tons of drugs, hormones, vitamins, food and medical instruments valued at more than \$500,000 which were used for the Scientific Exhibit at the Grand Central Palace for the A. M. A. are being packed and sent to the Allies and are hoped to be equivalent of many times their weight in tanks and guns and other life destroying equipment.

By building a stronger Kansas Auxiliary we will be contributing a service to humanity—

Am happy to be back in Kansas today—

Most Sincerely Yours,

Mrs. T. D. Blasdel.

AUXILIARY NOTES

The June bulletin of the Woman's Auxiliary to the American Medical Association reports that an Auxiliary to the Ohio State Medical Association was organized May 15, 1940, with Mrs. J. E. Purdy of Canton, Ohio, as President.

In the same issue of the bulletin a list of State Press and Publicity Chairmen who had done outstanding work was given. Among them was our own Mrs. W. G. Emery who served in that capacity for four consecutive years.

The National Handbook has been revised and is now obtainable. Members of the board will shortly receive

Introducing...

A complete professional printing service, ready to handle all of your printed necessities. A modern up-to-date plant, operated by Master Craftsmen.

Introductory Offer

One cabinet Strathmore Bond stationery, 100 sheets and 100 envelopes, Monarch size, sheets flat $7\frac{1}{4} \times 10\frac{1}{2}$; envelopes $3\frac{7}{8} \times 7\frac{1}{2}$. Printed, not over 4 lines copy. Postage paid in Kansas.....

\$3.00

SERVICE PRINT SHOP

for COMPLETE
PRINTING SERVICE

1515 LANE

TOPEKA, KANSAS

It's RAY BAN Time

For your sport enthusiasts — order
their corrections in RAY BAN.
They'll be pleased.

QUINTON - DUFFENS OPTICAL COMPANY

Your Local Independent Wholesaler

TOPEKA

HUTCHINSON

SALINA

DOCTOR - PATIENTS LIKE THIS
CHOCOLATE-FLAVORED EMULSION
OF LIQUID PETROLATUM!



TASTES LIKE THE CHOCOLATE IN A
DELICIOUS DESSERT

- Your patients will not object to taking this Emulsion of Liquid Petrolatum Chocolate Flavored. There is no oily after-taste! It has the appearance and the flavor of the chocolate in a delicious chocolate dessert. It may be obtained without phenolphthalein — or with 5 grains or 1½ grains to the fluid ounce. This product contains 60% Liquid Petrolatum U. S. P. and 1% Agar Agar.

The SMITH-DORSEY COMPANY

LINCOLN, NEBRASKA

Manufacturers of
Pharmaceuticals to the Medical Profession Since 1908

Council
Accepted



A PRESCRIPTION PRODUCT DESIGNED ESPECIALLY FOR PHYSICIANS (note prescription label on the bottle).



MAIL THIS COUPON

Gentlemen: Please send me a sample of Emulsion Liquid Petrolatum Chocolate Flavored

☐ With Phenolphthalein

☐ Plain

Dr.....

Address.....

City.....

State.....

A NEW AID TO
OPHTHALMIC SURGERY



**THE HAGUE
CATARACT LAMP**

The Hague Lamp efficiently and safely fluoresces the lens of the eye and corneal lesions stained with fluorescein. The supply of fluorescing ultra-violet is greater than in previous lamps and the illumination is uniform and stable. The Hague lamp is light in weight, compact, easy both to hold and manipulate. Extensive biological experiments show the abiolic rays are well within limits of safety. The Hague Cataract Lamp is another instrument by American, to expedite your ophthalmic practice.

BY AMERICAN OPTICAL COMPANY

complimentary copies. Others may obtain them from Mrs. Frank E. Coffey of Hays, Kansas. The price is forty cents.

Mrs. J. L. Lattimore of Topeka, Mrs. Harry L. Stelle of Pittsburg and Mrs. H. C. Markham of Parsons were appointed delegates from Kansas to the national convention in New York City.

In a mass protest against the National Federation of Woman's Clubs' endorsement of the Wagner Bill, New Jersey doctors' wives have walked out of the organization. The action was taken through the New Jersey State Medical Society Women's Auxiliary, which severed its affiliation with the federation.

Explained Mrs. G. E. McDonnell, of Mt. Holly, Auxiliary President: "The medical society does not agree with the health policy of the bill. As we are part of the society, we could not approve anything contrary to the society."

Cultists whose shingles bear the title "Dr." with no further explanation of their true status may find themselves in jail, under a new West Virginia statute. Its sweeping provisions apply to "any person" who uses "the prefix 'Doctor' or 'Dr.' . . . in any letter, business card, advertisement, sign or public display of any nature without affixing words . . . designating the degree he holds." Fines of from \$10.00 to \$50,000, plus a year's imprisonment, will be imposed on violators.—(New York State Medical Journal.)

Members of the Board of Directors of the Woman's Auxiliary are deeply grieved to report the death of Mrs. Seale Harris, of Birmingham, Alabama, on Thursday, May 9, 1940.

Mrs. Harris was President of the Woman's Auxiliary to the American Medical Association for the year 1925-26, serving as its Second President.—(Bulletin of the Auxiliary to the A. M. A.)

Behind **MERCUROCHROME**

(dibrom-oxymercuri-fluorescein-sodium)



is a background of

Precise manufacturing methods insuring uniformity

Controlled laboratory investigation

Chemical and biological control of each lot produced

Extensive clinical application

Thirteen years' acceptance by the Council of Pharmacy and Chemistry of the American Medical Association

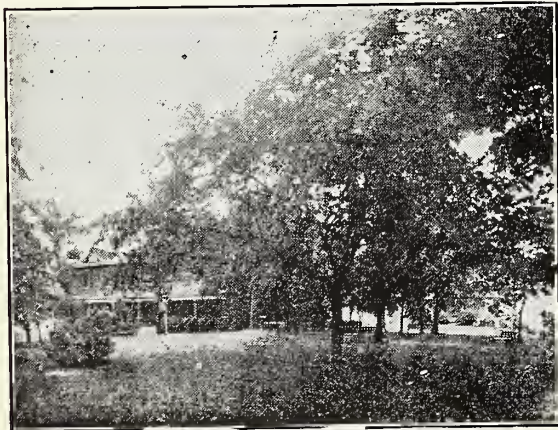


A booklet summarizing the important reports on Mercurochrome and describing its various uses will be sent to physicians on request.

Hynson, Westcott & Dunning, Inc.
BALTIMORE, MARYLAND

Grandview Sanitarium

KANSAS CITY, KANSAS, (26th St. and Ridge Ave.)



A High Grade Sanitarium and Hospital of super accommodations for the care of:

NERVOUS DISEASES

MILD PSYCHOSES

THE DRUG HABIT

AND INEBRIETY.

Situated on a 20-acre tract adjoining City Park of 100 acres. Room with private bath can be provided.

The City Park line of the Metropolitan Railway passes within one block of the Sanitarium. Management strictly ethical.

Telephone: Drexel 0019

SEND FOR BOOKLET

E. F. DeVILBISS, M.D., SUPT.

OFFICE, 1124 PROFESSIONAL BLDG., KANSAS CITY, MO.

THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

AUGUST, 1940

Number 8

THE TREATMENT OF PEPTIC ULCER*

Walter Lincoln Palmer, M.D.

Chicago, Illinois

A discussion of the treatment of peptic ulcer begins, as in the treatment of any disease, with the symptoms and the diagnosis. I shall not discuss the symptomatology of ulcer, important as it is, nor shall I consider the diagnosis of ulcer, except for the x-ray which is after all the most important single diagnostic procedure. Its reliability is directly proportional to the training, skill and competence of the examiner and upon his equipment. In trained hands the accuracy of the method is very great. It confirms the diagnosis of ulcer and gives much valuable evidence as to its location, size, and the complications present. The physician, however, must be able to interpret the validity of the roentgenologic evidence. Sometimes the roentgenologist fails to find ulcer when it is present, and on the other hand, diagnoses ulcer when it is not present.

Gastric ulcer is usually seen as a penetrating niche in profile. It may be seen en face; that is, looking into the face of the ulcer by compressing the anterior and posterior walls. In the duodenum the classical evidence of ulcer is the deformity. The width of the channel through the deformity is of considerable importance in estimating the amount of obstruction present. The maximum width cannot be judged from a single film; the fluoroscopic evidence is more reliable. In general it may be said that if the channel is more than three or four millimeters in diameter, operation because of obstruction is not indicated. The obstruction with duodenal ulcer, incidentally, is not pyloric but occurs at the side of the lesion. One cannot tell from the presence of such a deformity whether the ulcer is active or healed. An active ulcer is indicated by visualization of the crater. This is indicated by a sharply circumscribed collection of barium usually located just proximal to

the deformity and seen by compressing the anterior and posterior walls of the duodenum, squeezing the barium out of the bulb except for that lodging in the crater of the ulcer. As the ulcer heals, this crater disappears. Months later the roentgenologist may be totally unable to find any evidence to indicate that the ulcer had been present or on the other hand, he may be able to demonstrate distortion of the fold pattern in the bulb as the result of scarring or the classical deformity. Stomal ulcers may be seen as craters lying in or just distal to the stoma.

Occasionally, one is able to see with the gastroscope a gastric ulcer which the roentgenologist does not find, and follow its course to healing. At times, ulceration may be seen adjacent to a gastro-enterostomy stoma.

Before discussing the problem of the differentiation of benign and malignant gastric ulcer it is important to note that we are not particularly concerned with the question of so-called "carcinomatous degeneration" of benign ulcer. There is indeed little, if any, conclusive evidence that a given benign ulcer ever becomes carcinomatous. There is, on the other hand, a great deal of evidence to show that carcinoma may simulate or mimic benign ulcer almost completely and indeed, that carcinoma may persist for long periods of time and masquerade as a chronic gastric ulcer. So the important problem at any given time is the differentiation of the two lesions. The purely clinical differential criteria are not very reliable. The demonstration of gastric free acidity is important because benign ulcer does not occur in the continued absence of acid gastric juice. Carcinoma, on the other hand, may be found with high acid values. The continued absence of occult blood in the stool speaks strongly but not conclusively for benign ulcer and against carcinoma. Under treatment, the occult blood in the stool usually disappears within a week or two in benign ulcer and persists in carcinoma.

There are certain roentgenologic criteria which are important.

1. Ulcers of the greater curvature are almost always malignant.
2. Ulcers of the prepyloric or antral region

*Presented at the 81st Annual Session of the Kansas Medical Society, Wichita, May 14, 1940.

(The paper was illustrated by lantern slides. Some of the illustrations may be seen by referring to references 1, 2, 3, and 4.)

are likely to be malignant but many of them are not.

3. Size is of relatively little value in the differentiation. Small lesions may be carcinomatous and large lesions benign.

4. Benign ulcers usually extend beyond the normal confines of the stomach whereas carcinomatous craters are less likely to do so, and may give the typical meniscus sign of Carman.

5. The most conclusive evidence of the benign nature of a lesion is its complete disappearance in response to treatment. Carcinomatous craters may appear to decrease in size and indeed, actually may decrease somewhat, but almost never disappear completely.

The gastroscope often gives valuable evidence of the complete healing of a large chronic gastric ulcer. The roentgenologic and gastroscopic demonstration of complete healing is, in the light of our present knowledge, definite evidence that the lesion is benign. Indeed, no gastric lesion can be considered benign until its complete healing has been proved objectively by repeated roentgenologic examinations and if possible, by gastroscopic examinations. The disappearance of pain and even the disappearance of occult blood from the stool on medical management are not in themselves adequate evidence. The relief of pain is particularly unreliable, for the pain of carcinoma is frequently relieved by ulcer management.

Before discussing the principles of medical treatment for ulcer, it may be well to mention the indications for surgery. In the first place, an acute perforation constitutes a definite indication for immediate operation. Massive hemorrhage on the other hand is not an indication for immediate surgery. Obstruction of the outlet of the stomach is usually considered to be the most frequent indication for operation. Sippy early recognized that about eighty-five per cent of the cases with apparent obstruction were amenable to medical management. His early estimate has been found to be approximately correct. If, after a few weeks of medical management, the patient continues to lose weight, if the bed-time aspiration continues to exceed three or 400 cc, and if the lumen through the deformity is only two or three millimeters in diameter, obstruction may be said to be present and operation may be indicated. Under these conditions, the majority of men prefer gastroenterostomy. In our experience, the incidence of recurrent ulcer formation is approximately forty per cent. The incidence of recurrence following pyloroplasty or gastroduodenostomy is similarly high. Subtotal gastrectomy has a higher mortality rate but it has a lower incidence of recurrent ulcer formation.

One of the great difficulties with subtotal gastrectomy, particularly for duodenal ulcer, is the fact that when ulcers do recur following this operation, they are extremely difficult to treat medically and also surgically.

Subtotal gastrectomy is, however, the operation of choice for gastric ulcer. Recurrences are infrequent. It should be carried out whenever there is suggestive evidence of carcinoma and in cases in which the ulcer fails to heal under medical management. The failure of a gastric ulcer to heal is often associated with the complication of pyloric obstruction due to hypertrophic stenosis of the pylorus or spasm of the pylorus or contraction of the antrum. It should also be noted that there are some individuals who have recurrent massive hemorrhage in whom it is advisable to carry out a subtotal gastrectomy as a prophylactic against further bleeding, although operation does not necessarily protect against further bleeding.

In discussing the treatment of ulcer, it is important to distinguish between the problem of obtaining the healing of a given ulcer and the problem of preventing the development of recurrent ulcer. In many respects the two problems are closely related but our first task is that of bringing about the complete healing of the ulcer in question. In the case of gastric ulcer it is desirable to have both gastroscopic and roentgenologic evidence of healing, as I have pointed out. In duodenal ulcer the roentgenologic evidence of disappearance of the crater is valuable. However, healing of the defect is not complete when the crater disappears. Many weeks or even months are required for the epithelium to grow across the base of the ulcer and to develop into a normal mucosa. Only then can healing be said to be complete. The rapidity with which acute ulcers may develop and heal is illustrated by a patient who had had a gastroenterostomy some six years before she was first seen by us, when she was found gastroscopically to have a row of six ulcers along the lesser curvature of the stomach. Only two of these were demonstrable roentgenologically. A month later these lesions had completely disappeared. The patient remained well and a routine gastroscopy a year later showed a normal mucosa, but the following year, at a time when the patient was having no distress, a rather large ulcer was found on the edge of the gastroenterostomy stoma. This healed in a few weeks without difficulty.

Rational therapy of ulcer must be based on our knowledge of the natural history of the disease and upon its pathogenesis. The tendency of ulcers to heal and then recur is generally recognized. Apparently in the average case, very moderate changes in the diet or in the patient's regimen of living may

be sufficient to bring about a remission of symptoms and indeed, complete healing. It is for this reason that we have so many "ulcer cures" all of which are alleged to be most satisfactory. Indeed, any treatment given with enthusiasm usually gives so-called "good" results in a fair percentage of cases. In some patients, however, the therapeutic difficulties are great and healing is accomplished only with the most meticulous management. The cause of ulcer, of course, is not entirely clear, but there is complete clinical and experimental evidence to show that the lesion begins in the mucosa, that it penetrates the wall, and that the process is inseparably linked with the presence of acid gastric juice. The normal stomach is able to resist gastric digestion but for some unknown reason, in patients with ulcer, a limited area of the stomach or bowel is unable to resist the acid attack, is digested away, and an ulcer is formed. The processes which result in healing are those which improve the regenerative capacity of the mucosa or protect it from the corrosive action of the acid gastric juice.

Rest is of great value. Preferably, it should be both physical and mental. Hospitalization has many advantages in that it provides a period of rest and a period in which the patient is taught to follow a definite regime. However, many patients do well without hospitalization. Frequently, the hospital routine may be carried out in the home, provided the physician spends sufficient time with the patient and has his complete cooperation. Mental rest is as important as physical rest but it is much more difficult to attain. It is necessary for the physician to explain to the patient the nature of his illness, to reassure him, to know the things about which he is worried, and to help him to guide his life.

The diet we use is essentially the one outlined by Sippy and is a part of the scheme of acid neutralization devised by him. The old Sippy powders were calcium carbonate and sodium bicarbonate. We now use chiefly the calcium carbonate in two gram doses every hour. The tendency to constipation can be relieved by the use of magnesium oxide in doses of one-half to one gram substituted for the calcium carbonate powders. Magnesium trisilicate and aluminum hydroxide are satisfactory antacids if given in adequate amounts. Additional feedings may be begun on the third or fourth day, selecting soft foods such as cooked cereals, soft cooked eggs, rice, noodles, toast with butter, cream soup, soft pudding and plain cake. The diet given the patient at the time of his discharge is a most liberal one. The patient is discharged with the following diet and milk and cream and powder schedule:

SCHEME OF ULCER MANAGEMENT (3 Meal Schedule)

8:00 A.M. Breakfast—Choice of:

Orange juice, peach puree, applesauce, baked apple, prune puree, pear puree, apricot puree.

Cereals: Cream of Wheat, oatmeal (well cooked), boiled rice, eggs (1 or 2) soft boiled, poached or scrambled, 1 or 2 slices of toast and butter.

One cup coffee, tea, Sanka, or chocolate with cream and sugar as desired.

Powders	90 cc. milk and cream
9:00 a.m.	10:00 a.m.
9:30 a.m.	11:00 a.m.
10:30 a.m.	
11:30 a.m.	

12:00 Noon Dinner — Heaviest meal of the day. Choice of:

Soups, (strained or creamed), baked or mashed potato, rice, spaghetti, noodles, macaroni, bread and butter, vegetables, (strained, pureed or cooked until soft).

Meat: One small serving of roast chicken, stewed chicken, broiled whitefish, scraped beef, minced or diced beef with gravy, small portions roast lamb, beef and mutton, broiled steak and lamb chops may be taken after two or three months if thoroughly masticated.

Desserts: Bavarian cream, lemon sponge, grape sponge, blanc mange, cornstarch pudding, tapioca custard, vanilla custard, ice cream, sponge cake, angel cake, lady fingers, arrowroot cookies, vanilla wafers, plain cake, cheese, Jello and whipped cream, caramel custard.

Powders	90 cc. milk and cream
1:00 p.m.	2:00 p.m.
1:30 p.m.	3:00 p.m.
2:30 p.m.	4:00 p.m.
3:30 p.m.	5:00 p.m.
4:30 p.m.	
5:30 p.m.	

6:00 Supper. Not to exceed 360-450 cc (twelve-fifteen ounces) in total bulk.

Cream soups (see noon list), rice or cream of wheat or soft egg, crackers or buttered toast, desserts (see noon list).

Powders
7:00 p.m.
7:30 p.m.
8:00 p.m.
8:30 p.m.
9:00 p.m.

Aspirate the stomach at 9:30 p.m. nightly.

During the period of hospitalization the stomach is aspirated every night using a large Ewald tube. The purpose of this aspiration is to empty the stom-

ach at bedtime and in this way to decrease, if possible, the so-called night secretion. Many physicians are reluctant to carry out this routine nightly aspiration, but I think it is very important, particularly in cases of duodenal ulcer with moderate stenosis. It teaches the patient that he must eat a small evening meal if his stomach is to be empty at bedtime. Usually the patient continues the nightly aspiration until the amount obtained is regularly not over two or three ounces. Several weeks or months may elapse before this result is obtained.

Alkalosis, a rather frequent complication of ulcer, occurs both with and without the administration of alkali and is due in large measure to the loss of chlorides. Of course, the administration of alkali furthers the alkalosis. It is more likely to occur when sodium bicarbonate is given than when calcium carbonate alone is used. The alkalosis encountered with calcium carbonate is due primarily to the loss of chlorides and to the dehydration. An alkalosis does not constitute a serious problem for it may be combatted by the administration of sodium chloride in amounts of five to ten grams daily and of course, by the administration of large amounts of fluid.

Anti-spasmodics have long been used in the treatment of ulcer. Atropine and belladonna decrease gastric secretion to a certain extent and consequently we routinely use one milligram (1/60 of a grain) of atropine at supper-time with a similar dose at bedtime as a means of decreasing the night secretion. In some patients this dose produces dryness of the mouth and other unpleasant side effects and must be reduced.

Another method of therapy or perhaps more correctly, a further adjunct of therapy for use, particularly in cases of so-called intractable ulcer, is radiation. The gastric secretion may be lowered in many cases by x-ray therapy. It is impossible to predict the extent of the lowering or its duration. For instance, in a series of eighty-eight cases in which we used total doses of radiation of approximately 3000 roentgen units measured in air, a complete achlorhydria to histamine was obtained in thirty three.² The duration of the achlorhydria varied from a few days to a number of months. One patient, for instance, had a maximum free acidity with histamine of 110 before treatment. Three weeks later there was a histamine achlorhydria which persisted until the 98th day. The acid level then gradually returned. In another instance a similar result was obtained except that the achlorhydria was much more transient and very little result was obtained with the second dose of radiation. However, this patient got along very well clinically. In a third case achlorhydria developed and lasted from the 12th

day to the 200th day. The patient was an obese man who was brought to the hospital with a massive hemorrhage from a duodenal ulcer. Approximately three years have elapsed and he has had no further trouble. A fourth patient had had a gastro-enterostomy done and undone, he had had recurring massive hemorrhages both before and after gastroenterostomy, he had then had a subtotal gastrectomy and following this there developed a jejunal ulcer. This bled repeatedly. The patient was given most intensive medical management of various kinds, including the use for a long period of the Winkelstein drip. The ulcer as seen gastroscopically would heal and then recur. Finally he was given radiation therapy and for the past three years has had no further difficulty.

In conclusion may I point out that there is no perfect or completely satisfactory treatment of ulcer. Every case must be handled on the basis of the conditions and indications present. Fundamentally, peptic ulcer is a medical problem and can best be handled medically. At times, however, the surgeon can be of very great assistance. Perhaps the most important feature in the management of a given ulcer is the relationship between the physician and the patient. There must be complete cooperation. The patient must have confidence in his physician, the physician must understand the problem and he must understand his patient. After the healing of an ulcer is accomplished, the patient and the physician must continue to cooperate in a regimen of life designed to minimize the likelihood of recurrent ulcer formation.

1. Palmer, Walter Lincoln; Schindler, Rudolf; and Templeton, Frederic E.: "The Development and Healing of Gastric Ulcer—A Clinical, Gastroscopic, and Roentgenologic Study," *Amer. J. Digest. Dis.* 5: 501-522, Oct. 1938.

2. Palmer, Walter Lincoln, and Templeton, Frederic E.: "The Effect of Radiation Therapy on Gastric Secretion," *J.A.M.A.* 112: 1429-1434, Apr. 15, 1939.

3. Schindler, Rudolf: "Gastroscopy: the Endoscopic Study of Gastric Pathology," Chicago, 1937. University of Chicago Press.

4. Portis, Sidney: "Diseases of the Digestive Tract." Chapter on Peptic Ulcer.

Volunteer blood donor organizations, with a total membership close to 98,000, now serve fifty-six communities throughout the country, as the result of the influence of an organization which began in Rochester, N. Y., only three years ago, Arthur John Collinson, Rochester, points out in the March issue of *Hygeia*, *The Health Magazine*.

Known as the Legion of Blood Donors, the Rochester association up to January, 1940, had contributed more than 970 transfusions, given without pay from anonymous donors. The legion owes much of its effectiveness to the simple way in which it is run and the speed with which requests for blood are answered. Volunteers get in touch with the *Times-Union* newspaper, which co-operated with a radio broadcaster in founding the organization. Arrangements are made to have the volunteers' blood typed into one of the four classifications at a local hospital. With over 1200 names on file, the legion loses little time in finding a proper donor. Often a general appeal is made in a radio announcement.

THE VALUE OF THE DETERMINATION OF THE BASAL METABOLIC RATE TO THE GENERAL PRACTITIONER*

W. H. Olmsted, M.D.

St. Louis, Missouri

The purpose of this paper is to discuss the usefulness of a basal metabolic rate determination to the doctor in general practice. For the past twenty years we have been doing determinations in our office and it is upon this experience that we base the conclusions of this paper.

The general practitioner will in all probability send the patients on whom a basal rate is to be determined to a laboratory technician and, therefore, will not be greatly concerned with points concerning the technic of the determination. There will be a few practitioners who will wish to do their own determinations as well as the internist and diagnostician who certainly will wish to have his own apparatus and do his own determinations. I will discuss but briefly some important points of technic which everyone, even those not doing the test, as well as those who are directly overseeing their own technicians, should understand.

It is very essential that the person who is doing the test be a person who goes about her business as if she knows all about it and inspires confidence in the patient. She must make the patient comfortable, must see that the room is of the proper temperature for comfort, that the patient is covered and should check up on his temperature to be sure it is normal. She should be able to assure many patients who are quite frightened at the prospect of doing the test. The room in which the test is done should be free from traffic and noises and it is well to darken it and encourage the patient to take a nap while he is resting. The technician should ask the patient whether food and exercise has been taken just prior to the test. She should impress upon the patient the fact that he should not try to assist in the test and that in order to make his respirations natural he should try his best to think about something that is pleasant and enjoyable and above all he should keep the eyes closed and not watch the movements of the spirometer.

As you all know, it is desirable that the test should not be done sooner than twelve hours after the last heavy meal. But if a physician has afternoon hours he may permit the patient to have a cup of black coffee and a piece of dry toast or a glass of orange

juice and toast for breakfast. Then, during the morning hours, the patient should not do excessive amounts of exercise and come to the office without his lunch. Under these circumstances just as good rates can be obtained in the afternoon hours as in the morning hours.

You are all doubtless aware that the basal metabolic rate is standardized on the size of the patient, his age, and sex. Also, you are aware that the results are reported in the per cent above or below a standard rate for the specific individual. Boothby of the Mayo Clinic has carefully analyzed a large number of normal individuals and found that eighty per cent of the normal rates fall between plus ten and minus ten per cent and that almost 100 per cent fall between plus fifteen and minus fifteen per cent. Normal individuals, with the proper technic, will show as close an approximation to the normal rate as they do to the standard normal body temperature.

I prefer a spirometer type of apparatus which depends on the consumption of oxygen and is provided with a small blower to circulate the oxygen. I further believe that the period of time during which the consumption of oxygen is measured should be at least six minutes. Whether more than one period shall be run will depend on how regular and even is the subject's respiratory excursions. Every apparatus must show a visual record of the respirations. This record tells one at a glance whether the determination is reliable or not. Figures 1 to 5 illustrate good and poor determinations.

There can be no doubt that before the need of a basal rate is evident the patient should have a history and physical examination.

SYMPTOMS BROUGHT OUT IN THE HISTORY SUGGESTING THE NEED OF A BASAL METABOLIC RATE

I have never kept count of the number of patients whose principal complaint was fatigue, weakness, or loss of energy but such complaints are very common indeed. It is my practice whenever these symptoms are presented to determine the basal metabolism. In the greatest majority of them the rate is normal and yet it is worth while doing the test for changes in the metabolic rate often are responsible for these obscure complaints. Another symptom which to my mind indicates a determination of the basal rate is nervousness. Since these two states or symptoms are so common I think a diagnostician or internist will find that he is determining the basal rate on every third patient he examines. There are other symptoms which call for a determination such as changes in the sex function; disturbances in menstruation or loss of libido or sex power in the male; drowsiness; sensitivity to cold; extremities that fall asleep; dry skin

*Presented at the 81st Annual Session of the Kansas Medical Society, Wichita, May 14, 1940.

and hair and doubtless you will think of many others.

From the physical examination are obtained the following signs that seem to me to indicate the need of a basal rate determination—obesity or under nutrition. The former is usually accompanied by a normal basal rate while the latter, as we will discuss later, frequently shows depressed rates. The skin is a fine index of the function of the thyroid. Even slight increases in thyroid function are accompanied by a smooth and silky skin which is the kind "you love to touch" and on the other hand a hypofunctioning thyroid results in dry, rough, harsh skin and dry hair. A blood pressure that is low, a fast heart rate, or an unduly slow one are also reasons for determining the metabolism.

FACTORS INCREASING AND DECREASING THE METABOLIC RATE

Aside from the size of the patient, his age and his sex, I should like to enumerate the factors that are given by DuBois as influencing the basal metabolism. (1) Occupation. Those engaged in muscular labor have about a five per cent higher metabolism than those who lead sedentary lives. (2) All races conform to our normal standards except Orientals and those living in the tropics who have about a ten per cent lower metabolism. (3) If the individual has been accustomed to taking a high protein diet he will have a slightly higher rate than those who have been consuming the usual diet of this country. (4) Menstruation influences the metabolism of only two or three per cent and the rise occurs in the week preceding the beginning of flow. Not all women show this slight premenstrual rise. (5) Account must be taken of the environmental temperature at the time of the determination but if the patient is comfortable the environmental temperature may be ignored. It is difficult, however, to do basal determinations during summer temperatures of 100 degrees or more. (6) A highly emotional patient will give at least in the first determinations a higher rate than his actual normal. (7) The newness of the experience will in some individuals show a five per cent increase in the first test. (8) Strenuous exertion must be avoided preceding the test. Finally, it is advisable to always take the minimal figures. Usually errors result in an increase in the rate. Fatigue should be carefully avoided so more than three determinations at one sitting should not be done. If these are unsatisfactory and do not agree, the patient should return on another day for observation.

The basal metabolic rate never makes a diagnosis any more than the clinical thermometer does. It simply tells one that the tissues of the body as a whole are either using more oxygen or less than is the normal for the particular individual observed.

There are, however, three conditions which tend to increase the rate. These are infection and fever, malignancy, and hyperactivity of certain of the endocrine glands.

Fever: It is an interesting fact that fever regardless of the infectious agent usually increases the basal rate about thirteen per cent for each rise of one degree Centigrade. Thus a typhoid fever patient when he is running a temperature of 105 degrees (forty degrees C.) will show an increase of forty per cent or more in the basal metabolism. The exception to this rule is tuberculosis which apparently does not increase the rate and is not toxic as the more acute types of fever.

Malignancy: Early malignant growths do not disturb the basal rate but in the later stages of malignancy, especially if the malignant growth causes a good deal of toxicity, there is an increase. This increase cannot be predicted and varies with the type of malignant growth. It is very high in myelogenous leukemia and the increase in the rate is proportional to the leukocyte count.

Endocrine Glands: As you are well aware the master endocrine gland of the body is the anterior pituitary. It has very direct effects upon the thyroid, suprarenal cortex and sex glands. When there is hyperactivity of the pituitary gland such as in acromegaly there are only minor increases in the basal metabolic rate and great variations have been noted. There are only rare instances of hyperactivity of the suprarenal cortex so we are unable to say just what effects on the basal rate the increased activity of this gland may show. The thyroid is the endocrine gland which most profoundly influences metabolism.

If the patient shows a decreased rate certain conditions should immediately come to mind. These are undernutrition, hypoactivity of the thyroid, pituitary or adrenal cortex. There are innumerable excellent experiments to show the effects of undernutrition on the basal metabolism. During acute states of undernutrition such as starvation the rate rapidly falls. In the case of Benedict's subject "L" who fasted thirty days, by the end of twenty days the metabolism had fallen thirty per cent. Other experiments on chronic undernutrition have shown that individuals vary a good deal but that in general the metabolism may be as low as thirty per cent below the normal. Furthermore, when undernourished people are fed their metabolism rapidly returns to the normal level. This fact sometimes makes it difficult for patients to gain weight when they are stuffed. How can one determine whether in an undernourished patient the lowered metabolism is due to undernutrition or to hypofunctioning of the en-

ocrine glands? In my experience, if the lowered metabolism is due to undernutrition alone the patient will not tolerate thyroid medication, that is, he will have symptoms of hyperthyroidism when thyroid is administered. On the other hand, if his lowered metabolism is due to a hypofunctioning of the thyroid gland he will not only tolerate thyroid extract but will show marked improvement of his general nutrition and disappearance of fatigue and weakness.

It has been our privilege to study a few cases of experimental hypopituitarism in man. Through the courtesy of Dr. Ernest Sachs we have seen some of his cases in whom he has removed the pituitary gland for a tumor and following this removal the patient has shown marked symptoms of hypopituitarism. These proven cases show extreme weakness and asthenia and their basal metabolic rates are usually in the neighborhood of minus thirty per cent. This lowering of the rate is presumably due to loss of the stimulating effect of the thyrotropic hormone of the pituitary resulting in a hypofunctioning of the thyroid gland. It is an interesting fact that thyroid medication in these patients although it will raise the metabolism to normal, does not relieve their symptoms of weakness and asthenia. We are at present experimenting with the use of thyrotropic and adrenaltropic hormones on these individuals.

In Addison's disease there is not the consistent lowering of the basal rate as one would think should be the case. Some of the reported cases show only slight decreases in the metabolism while others are markedly depressed.

When one receives a report on the basal metabolism the degree of variance from the normal rate is of first consideration. Unless the rate is more than ten per cent below the normal it is of very little significance. In fact, it is better to take the level of fifteen per cent below before one should consider any therapeutic indications and unless the rate is increased above ten per cent and better yet above fifteen per cent one need not be greatly concerned with this finding. Repeated rates over ten per cent accompanied with mild signs of hyperthyroidism, but only when accompanied by these signs, may be of true significance. When one obtains rates of minus twenty or plus twenty then one can be fairly sure there is something that is disturbing the oxidative processes of the body.

THE BASAL METABOLISM IN ABNORMAL THYROID STATES

Does hyperthyroidism exist without an increase in the basal metabolism? There can be no doubt in my mind that the diagnosis of hyperthyroidism cannot

be made unless there is an increase in the basal metabolic rate. In fact, I do not believe the diagnosis of hyperthyroidism can be made on symptoms and signs of hyperthyroidism but without an increase in the basal rate. Cases in this category are numerous and are best treated by assuming that they fall into that large field of neurotic individuals. I have followed several of them over years of time and have had occasion to see in some instances the gland operated upon but have yet to see one of them that was ultimately improved by a partial thyroidectomy.

In addition to aid to diagnosis that the basal metabolism gives to making a diagnosis of hyperthyroidism it is of great value in indicating the degree of toxicity of the hyperthyroid state. When one obtains rates which are consistently above forty per cent particularly after two weeks of iodine administration one can be very sure he is dealing with a toxic case of hyperthyroidism and on the other hand when the rate falls below forty per cent particularly after administration of iodine one can be fairly confident that he is not dealing with an overtotoxic thyroid. Finally, the basal metabolism is an excellent index of the therapeutic success of treatment. After repeated rate determinations have indicated the degree of hyperthyroidism one should follow carefully the effects of iodine therapy by metabolic determinations at two or three day intervals. After the operation it is not necessary to do a determination before the seventh or eighth postoperative day and then one expects the rate still to be elevated. Usually the full effect of the operation is not indicated before a month has elapsed and at this time a basal metabolism will indicate whether enough of the thyroid gland has been removed. However, longer periods of time may be necessary in some instances to show just how low the rate may go. So it is important to determine the basal metabolism at monthly intervals for as long as three or four months after thyroidectomy. At this time the rate will certainly reach its lowest level.

Can one make the diagnosis of hypothyroidism without a decrease in the basal metabolism? If there are other factors present in the body which tend to elevate the rate they may balance the decrease in rate due to a hypofunctioning thyroid but unless such factors are present the diagnosis of hypothyroidism must depend upon obtaining a lowered basal metabolism. The degree of depression of the metabolism is a great aid to the therapeutic administration of thyroid extract. Years of experience have proven to me that one can expect one grain of thyroid extract or .2 mg. of thyroxin to raise the metabolism ten per cent. Thus with individuals showing in the neighborhood of minus fifteen per cent metabolism

one can safely administer daily one grain of extract. Patients showing a decrease of twenty per cent can take two grains and those showing thirty per cent, three grains. I have rarely seen any instances even of complete myxedema who could take thyroid extract as standardized by the American pharmacopeia of more than three or three and one-half grains daily over an indefinite period. If one uses this standard one will rarely see patients complaining of hyperthyroid symptoms due to an overdose of thyroid extract. When a patient has experienced hyperthyroidism from excessive doses of thyroid extract he is very loath to take thyroid again. So excessive doses are to be avoided. I do not believe that a dose of thyroid extract of less than one grain is very frequently indicated and I myself never prescribe doses of less than one-half grain.

I do not attempt to raise the metabolism quickly by a massive dose of thyroid extract administered over the course of one or two days. I have found it a better practice to administer the dose that is indicated by the fall in the basal metabolism and wait a period of three or more weeks before repeating the metabolic rate. One should always check up on the efficacy of his thyroid medication for occasionally the initial determination does not indicate the extent of the hypothyroid state. It is not an infrequent experience to give one grain of thyroid after obtaining a rate of say minus fifteen per cent and after a month of thyroid therapy find that the rate is still minus fifteen per cent. Under these circumstances another grain of thyroid may be added. Why it is that the initial determination does not always indicate the

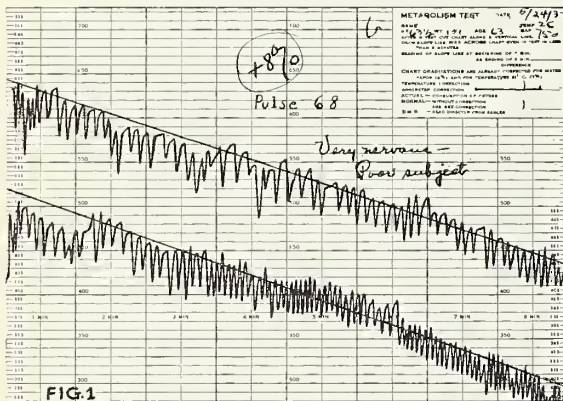


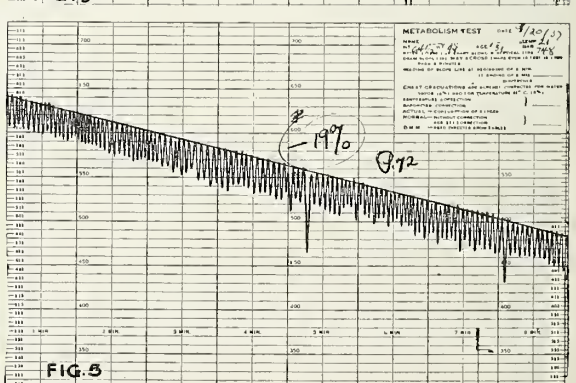
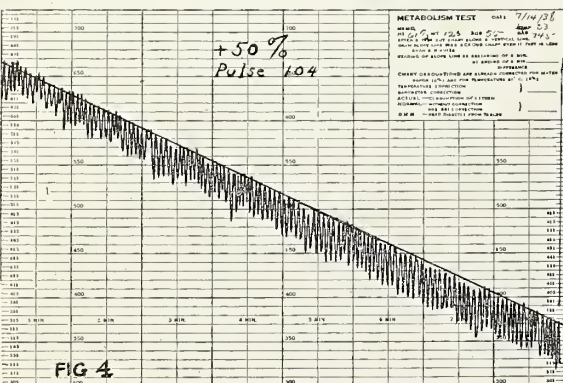
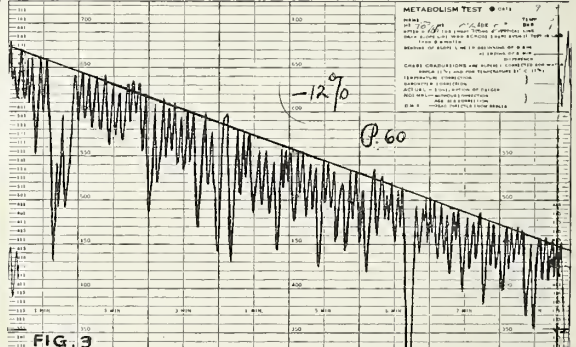
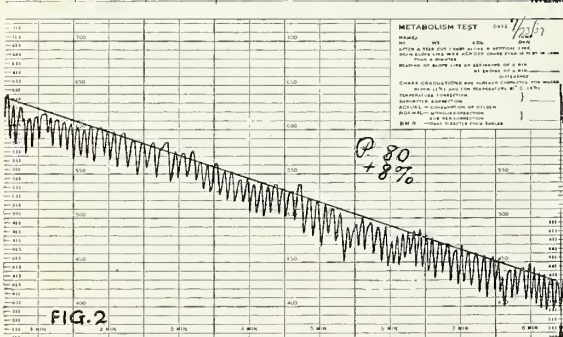
Fig. 1. Two curves of a very nervous patient. They are unsatisfactory.

Fig. 2. Another curve on the same patient which is satisfactory.

Fig. 3. Illustrates very irregular respirations but the determination is satisfactory and can be read.

Fig. 4. Good curve on a hyperthyroid patient.

Fig. 5. Good curve on a hypothyroid patient.



true need for thyroid I cannot say, but the obvious explanation is that either something has interfered with the lowering of the rate or the thyroid extract is not well absorbed from the gastro-intestinal tract. I believe it is important not to attempt to raise the metabolism in hypothyroid individuals to normal but rather to seek to keep them at a level as indicated by the basal metabolism of between zero and minus ten per cent. At this level there are no symptoms of hyperthyroidism and those symptoms due to the hypothyroid state are corrected.

USE OF BASAL METABOLISM IN CARDIAC DECOMPENSATION

All of you have patients under your observation who have cardiac decompensation and after proper therapy of rest, digitalis and other drugs that may be indicated, are still barely able to show enough compensation to exist comfortably. Such cases are on the borderline between compensation and decompensation. Anything that we can do to decrease the work of the heart might well throw the balance on the side of better compensation. There is a clear indication for the use of basal rate determination in these cases. After they are well compensated in bed, one can determine the basal metabolism and expect it to be normal. If it is normal or below normal nothing more can be done along this line but not infrequently one will find rates of plus ten or plus fifteen per cent. Now if one could change a plus fifteen per cent metabolism to a minus ten or minus fifteen per cent metabolism this reduction of twenty or thirty per cent in the basal metabolism might well change the cardiac status of the individual. I do not believe in subtotal thyroidectomy for cardiac patients because one has after such an operation a patient who has two diseases instead of one. But there are other agents for reducing metabolism beside the knife of the surgeon. The use of iodine and of x-ray therapy to the thyroid gland can well be attempted without any risk to the patient and if one can reduce metabolism by these agents considerable benefit is bound to result. It is very well then to keep in mind the need of basal rate determinations in the cardiac patient who is only compensated while in bed.

USE OF BASAL RATE DETERMINATIONS IN DIABETES

Another disease in which the basal rate is very useful is diabetes mellitus. In this condition one must make a fairly accurate estimate of the food calory needs of the body and the basal metabolism as determined is important in estimating this need.

As one follows diabetics year in and year out, one will not so infrequently see a patient who begins to show sugar without apparent cause. He may be following his diet well and taking the dose of insulin

which has always kept him sugar free. In such cases the determination of the basal rate may show that a mild grade of hyperthyroidism exists. It is well known that hyperthyroidism develops in diabetics more frequently than it does in non-diabetics and that when this complication of diabetes occurs, the diabetic condition always becomes considerably worse. It is, therefore, quite important to the diabetic just as it is to the cardiac, to reduce the basal rate to the normal level. The determination of the basal rate, aside from the increase of intensity of the diabetic condition, is the only means which will reveal this complication of diabetes for the symptoms and signs of hyperthyroidism are rarely very evident.

CONCLUSIONS

The determination of the basal metabolism should be considered in very much the same light as the clinical thermometer. It presents to one a fact concerning the oxidative processes of the individual as related to the normal standard. If the rate varies it is still a diagnostic problem as to why that may be so. Just as the clinical thermometer is useful in following the course of a fever so the basal metabolic rate is useful in following the course of hypermetabolism and hypometabolism.

ERYSIPELOID

A REPORT OF THIRTEEN CASES AMONG VETERINARY STUDENTS AT KANSAS STATE COLLEGE*

Harold T. Gross, M.D.

Manhattan, Kansas

Erysipeloid is an erysipelas-like infection of the skin which occurs through abrasions in the skin, usually on the hands. The condition was first described in 1873 by Fox, and also by Baker in the same year who called it "erythema serpens." The name "erysipeloid" was introduced by Rosenbach in 1884.¹

The causative organism, *Erysipelothrix rhusiopathiae* (suis),² is a gram-positive, non-motile, non-spore forming, microaerophilic bacillus. This organism is the bacillus of swine erysipelas and also apparently occurs in human and mouse strains, although this is a matter of conjecture. It has an unusual dissemination and apparently originates from dead matter of animal and plant origin. It has a tendency to form long, branching filaments and is easily cultured in hormone broth and calf brain

*From the Student Health Service, Kansas State College, Manhattan, Kansas.

medium. Pure cultures are obtained from the heart blood of inoculated pigeons.

There is evidence at the present time that swine erysipelas is on the increase in the United States (see Fig. 1). Infection of man through the ingestion of food or water contaminated with the *Erysipelothrix* organism apparently does not occur, or is extremely rare. The organism is quite resistive. Boiling is immediately effective, but it will resist drying for a month or more, and in salted and pickled meats it will survive for three or four months. Meloni reports the survival of the organisms for more than eight years in a refrigerator in moldy gelatin, and Stickdorn reports the finding of live and virulent organisms in a broth culture stored for more than seventeen years.³ Bichloride of mercury 1:1000, phenol in a five per cent solution, and formalin in a two per cent solution are all effective in destroying *Erysipelothrix suis* within five to fifteen minutes. A precipitin test can be obtained through the use of a suitable immune serum and antigen, and an agglutination test is also of value.

This disease has been generally reported as occurring among butchers, poultry-dressers, fishmongers, housewives, and others handling animal products. Klauder, making an extensive study of the disease in this country reports widespread occurrence among commercial fishermen handling live fish along the entire Atlantic seacoast. This author⁴ in a recent review of 100 cases states that "Infection can invariably be traced to contact with animals, fish, Crustacea, dead matter of plant and animal origin, or matter derived from animals such as hides, pelts, bone, and manure." He reports in this group six cases involving veterinary students "infected when dissecting a dead horse." He also reports unusual sources of infection, e.g.—from the sting of a jellyfish, off a stone in a dried creek, carrying an opossum with its tail wrapped around abraded knuckles, and from the prick of a spine on a dried, stuffed fish mounted as an ornament. Gilchrist⁵ reported a famous group of 329 cases in which 323 were caused by crab bites or lesions produced by crabs. Brown⁶ re-

ports an infection in himself following the scuffing of a knuckle while cleaning a buffalo skull. Ritchie⁷ reports one case from handling fish caught in the Great Lakes, and Lawson⁸ has reported 210 cases from cattle bones used in making buttons.

As originally described by Rosenbach,⁹ erysipeloid infection occurs, in the majority of instances, following slight traumatic injuries beginning as an attack of cellulitis with an erythematous patch, usually on a finger, spreading slowly and developing characteristically a well-defined, slightly elevated, bluish margin accompanied by intense swelling, itching, pain, and tenderness (see Fig. 2). Associated lymphangitis and lymphadenitis are not uncommon. The disease may spread from one finger to another until all fingers or a considerable part of the hand is involved. There are usually no constitutional symptoms to speak of, and the disease runs a self-limited course, in most instances, of about three weeks. Recurrences are common and many cases reappear in the same area or in another previously uninvolved area. The incubation period of the disease usually varies from one to four days.

The treatment for the most part is conservative. Wet dressings and the usual antiseptics are effective.

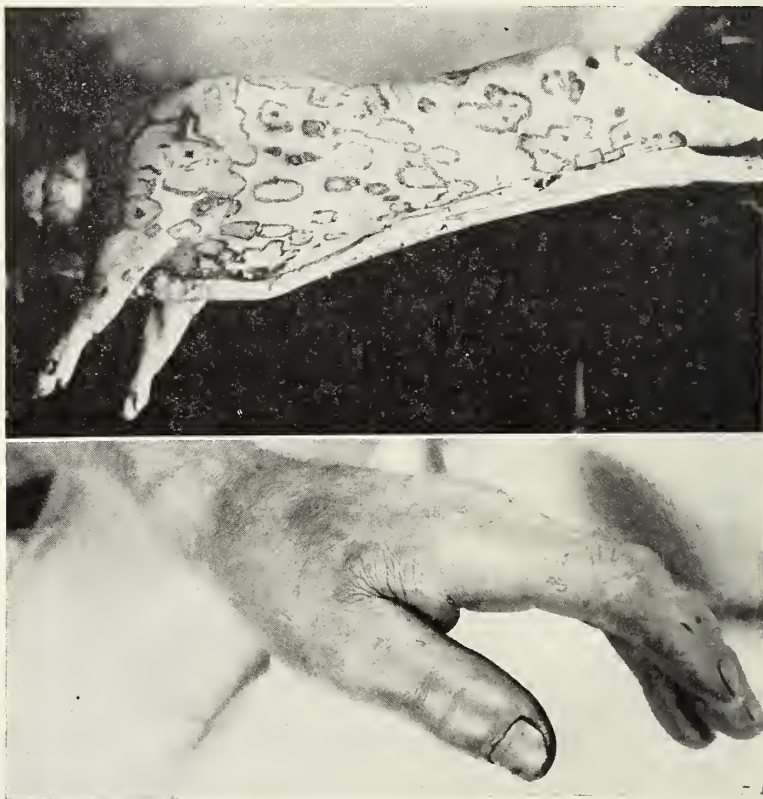


Fig. 1. "Swine Erysipelas or Diamond Skin Disease in a Hog" (Courtesy of A. G. Schoch, M.D., from C. J. Young, Dallas, Texas).

Fig. 2. "Erysipeloid of eight days' duration. Note the sharply defined and elevated border." (Courtesy of J. V. Klauder, M.D., Philadelphia, Pennsylvania.)

Klauder favors constant wet dressings of twelve per cent ichthammol in alcohol. He recommends repeated erythema doses of ultra-violet with a water-cooled mercury quartz lamp (Kronmayer lamp). Holman¹⁰ also reports excellent results in the treatment with ultra-violet irradiation. There is available an anti-erysipeloid serum.¹¹ Klauder states serum is only indicated if the infection persists one month, if its progress is rapid, or if arthritic symptoms are conspicuous. Ingram¹² recommends fractional doses of x-ray, and Walker¹³ reports one case treated successfully with x-ray.

During the period from March, 1936 to March, 1939 inclusive, there occurred thirteen cases of erysipeloid infection among undergraduate veterinary students at Kansas State College. The first six of these cases occurred in March, 1936. These students reported to the Student Health Service for treatment of hand infections apparently incurred while dissecting horse cadavers. Following the original group one case occurred in March, 1937, one in January, 1938, one in January, 1939, and four more cases were observed in March, 1939. All but two patients reported that the infection had developed in a recently traumatized area.

Because of the marked similarity of all the cases and the definite association, in nearly all instances, with slight traumatic injuries in the veterinary anatomy laboratory and post-mortem table, swine erysipelas was suspected. Accordingly, an attempt was made to determine the exact source of the infection. This was definitely established by Dr. C. C. Morrill, formerly of the Department of Veterinary Pathology at Kansas State College. Fluid from a vesicle of a suspected case of erysipeloid was withdrawn as was tissue from a poorly preserved region of the horse cadaver upon which the same student was dissecting. It was very definitely determined that the organism was *Erysipelothrix* and the source of infection the horse cadaver as demonstrated by identical morphology, staining and cultural characteristics, and pathogenicity of the organisms isolated from the student and the cadaver. In addition, it was also found that serum from four previously infected students, still in residence at the College, agglutinated swine erysipelas antigen, and that anti-swine erysipelas serum protected pigeons from the organisms of human origin.¹⁴ These laboratory findings together with the characteristic clinical features definitely supported the diagnosis of Erysipeloid infection.

It is more difficult to preserve the gluteal and thigh regions of horses used in dissection because of the amount and thickness of muscles present in these regions. It was poorly preserved tissue from

one of these areas which was used in proving one source of the infections. However, it is generally known that swine erysipelas is very rare among horses.

In the veterinary anatomy laboratory students are instructed to exercise precautions in the handling of dissecting instruments as well as in the care of minor abrasions. Antiseptics are made easily accessible. The use of gloves in the laboratory is optional. In addition, all equipment is cleansed regularly and the specimens for dissection are stored in refrigerated rooms between class periods. However, this refrigeration of cadaver material has only been in effect during the present school year. The adequate refrigeration of this material may reduce the incidence of these infections in the future.

The following is a summary of findings of the thirteen Erysipeloid cases observed at Kansas State College:

1. Number of patients: thirteen.
2. Sex: Male.
3. Age group: 19-30 years.
4. All cases hospitalized; each for an average of 7.1 days.
5. Incubation period:
 - a. Average incubation period for eleven cases: four days.
 - b. Twelfth case indefinite; last history of trauma in region of infection occurred twenty-nine days previously.
 - c. Thirteenth case also indefinite; history of trauma fifty-one days previously.
6. Average duration of the disease:
 - a. Twelve cases:
 - (1) Average number of days: fifteen days.
 - (2) Longest period: twenty-six days.
 - (3) Shortest periods: eight days.
 - b. Thirteenth case: duration thirty-three days (lesions occurred on the forearm without definite history of recent trauma). (See under 5, c).
7. Original sites of infection:
 - a. Right hand: 7 cases. b. Left hand: 5 cases

Thumb	1 case	Index finger ..	.4 cases
Index finger	2 cases	Middle finger..	1 case
Middle finger...	2 cases		
Ring finger	1 case		
Little finger	1 case		
 - c. Right forearm: 1 case.
8. Definite lymphangitis with epitrochlear and axillary lymphadenitisten cases
9. Temperature range: Normal to 100.4 (highest recorded.)
10. Laboratory findings: Very mild leucocytosis, not over 10,000 cells per cu. mm.

11. Clinical findings:

- a. Predominant findings of trauma with an abrasion or laceration followed by redness, swelling, tenderness, streaking, and enlargement of regional lymph nodes.
- b. Some lesions encrusted and superficial.
- c. Skin sites over joints commonly involved.
- d. Most marked case showed a widespread, encrusted infection with vesicle formation superimposed on a bluish-tinged, slightly elevated base resembling old clotted blood.
- e. Constitutional symptoms minimal or absent.

12. Significant history:

- a. All cases except two gave a history of recent trauma preceding the infection.

13. Therapy: Conservative including boric acid and $MgSO_4$ packs with the usual antiseptics. A few cases received small doses of sulfanilimide up to forty grains. Ultraviolet irradiation also used.

14. Prognosis: Very good. All cases completely recovered. Two cases recurred within a six-day interval following apparent recovery, the infection recurring in the previously involved areas.

SUMMARY

1. All the cases observed were undergraduate veterinary students.

2. All except two gave a history of very recent trauma associated with their work in the Veterinary Division. One gave a definite history of injury on an infected horse's tooth. Another case gave a history of scratching his knuckles on a locker and going directly to the anatomy laboratory for dissection followed by an infection in the abraided area in forty-eight hours.

3. Except for one lesion on the forearm all infections occurred on the hands and fingers (unilateral in all cases), and all lesions were of characteristic appearance.

4. Lymphangitis and lymphadenitis occurred in all but three cases.

5. There were no constitutional reactions of importance. The highest temperature recorded was 100.4. The leukocyte count never exceeded 10,000. An eosinophilia from one to five per cent was observed in six cases.

6. The predominance of cases occurred on the right hand and favored the month of March (1936 and 1939).

7. The incubation period in eleven cases was

maximum, averaging four days. In two cases the incubation period was indefinite.

8. All cases recovered with conservative treatment. Recurrences were observed in two cases.

9. Except for one case the average duration of the disease was fifteen days.

10. Most of the cases observed occurred in spite of the application of antiseptics, usually Tr. iodine.

11. Evidence of one source of infection from horse cadavers was definitely established.

CONCLUSION

A series of thirteen cases of Erysipeloid infection among veterinary students at Kansas State College is presented. One source of infection from horse cadavers was definitely established.

ACKNOWLEDGMENT

Grateful acknowledgment is hereby expressed to Dean R. R. Dykstra of the Division of Veterinary Medicine and members of his staff for their co-operation in supplying certain data.

BIBLIOGRAPHY

1. Klauder, J. V., "Erysipeloid and Swine Erysipelas in Man: A Clinical and Bacteriologic Review; Swine Erysipelas in the United States," J.A.M.A., 86: 536, 1926.
2. Kelsor, R. A., "Manual of Veterinary Bacteriology," 3rd ed., Baltimore, The Williams and Wilkins Co., 1938, pp. 328-333.
3. Van Es, L., and McGrath, C. B., "Swine Erysipelas," Research Bull. No. 84, Univ. of Neb. Agric. Exp. Sta., Aug., 1936.
4. Klauder, J. V., "Erysipeloid as an Occupational Disease," J.A.M.A., 111: 1345-1348, 1938.
5. Gilchrist, T. C., "Erysipeloid: With a Record of 329 Cases, of Which 323 Were Caused By Crab Bites or Lesions Produced by Crabs," Jr. Cutan. Dis., 22: 507-519, 1904.
6. Brown, J. C., "Erysipeloid Infection Following an Abrasion," Minn. Med. Jr., 19: 70, 1936.
7. Ritchie, E. B., and Becker, S. W., "Erysipeloid: A Report of Case of Infection Acquired from Fish of Great Lakes," J.A.M.A., 95: 26, 1930.
8. Lawson, G. B., and Stinnett, M. S., "Erysipeloid Occurring Among Workers in a Bone Button Factory," South. Med. Jr., 26: 1068-70, 1933.
9. Andrews, G. C., "Diseases of the Skin," 2nd ed., W. B. Saunders Co., p. 409, 1939.
10. Holman, H. D., "Physical Therapy in the Treatment of Erysipeloid and Kindred Skin Infections," Arch. Physical Therapy, X-ray, Radium, 13: 469-473, 1932.
11. Council on Pharmacy and Chemistry, New and Nonofficial Remedies, "Anti-erysipeloid Serum," J.A.M.A., 112: 49, 1939.
12. Ingram, J. T., and Stuart, R. D., "Erysipeloid: With Bacteriological Report," British Jr. Derm. & Syph., XLVI, p. 305, July, 1934.
13. Walker, M. A., and Allen, L. G., "X-ray Treatment of Erysipeloid," Jr. Kans. Med. Soc., 39: 383, 1938.
14. Morrill, C. C., "Erysipeloid: Occurrence Among Veterinary Students," Jr. Inf. Dis., 65: 322, Nov.-Dec., 1939.
15. Klauder, J. V., and Harkins, M. J., "Erysipeloid in the United States: A Clinical and Laboratory Study," 96: 1205, 1931.
16. Sutton, R. L., and Sutton, Jr., "Diseases of the Skin," 9th ed., St. Louis, C. V. Mosby Co., p. 402, 1935.
17. Klauder, J. V., "Erysipeloid: Bacillus of Swine Erysipelas Infection—A Disease of Industry," Jr. Ind. Hyg., 14: 222, 1932.
18. Klauder, J. V., Righter, L. L., and Harkins, M. J., "A Distinctive and Severe Form of Erysipeloid Among Fish Handlers," Arch. Derm. & Syph., 14: 662-678, 1926.
19. Schoch, A. G., "Erysipeloid of Rosenbach," Texas St. Jr. Med., 28: 704-705, Feb., 1933.
20. Pusey, W. A., "The Principles and Practice of Dermatology," 4th ed., D. Appleton & Co., p. 538, 1924.

There is no evidence that the hardness or softness of ordinary drinking water has any appreciable influence on arthritis, gallstones or intestinal disorders, Hygeia, The Health Magazine declares in answer to an inquiry.

The use of soft water for the skin may be preferable because it increases the purifying action of soaps, producing lather with less free alkali, and thus protecting the skin against the removal of its natural oils.

APPENDICITIS WITH COMPLETE SITUS INVERSUS VISCERUM

C. W. Lawrence, M.D.

Emporia, Kansas

We shall attempt in the following brief discussion of Situs Inversus to review the scant literature covering the subject and present a case of left side appendix with complete transposition of both the thoracic and abdominal viscera, diagnosed by physical examination and confirmed by the x-ray, electrocardiograph and at operation.

Anatomical anomalies have attracted the attention of anatomists for centuries and in late years the embryologists have advanced many theories as to causation, but a satisfactory explanation has not as yet been established.

Much experimental work has been done with the embryo chick, by lowering the temperature at different stages of development and many anatomic phenomena have been produced due to interference with embryonal development.

We are all familiar with deformities such as hare lip, cleft palate, polydactylism, spinabifida, exomphalos and many others including the monstrosities we occasionally see, but the embryologists are agreed that situs inversus bears no relation to these anomalies but is due to an entirely different cause; in fact there is no explanation why the viscera are not normally in this position.

The particular anomaly with which we are concerned—that of complete transposition of both the thoracic and abdominal viscera was first recorded in the 17th century, four cases being reported. Since that time an occasional case has been found until our Civil War when seventy-nine cases of dextrocardia were reported.

There is a wide variation in the estimation of the frequency of the phenomena—in the University of Wisconsin it is said to occur once in every 5,000 registrants while at the Mayo Clinic from 1910 to 1927 it was found ten times in 347,000 patients, and according to Le Wald it is found once in 350,000 examinations in the U. S. Army. It is probable that there are many cases not diagnosed as it is said to occur once in every 5,000 autopsies. Two hundred seventy cases had been reported by 1924. It occurs more frequently in males than in females.

In many instances there is a dextrocardia while the other viscera are in their normal position. There are also cases in which the heart is displaced to the right by some extraneous force as pleural effusion

or pneumothorax when a true dextrocardia does not exist.

A complete situs inversus of all the viscera is entirely compatible with health and longevity and except as an anatomical curiosity it is of importance only to the embryologist, cardiologist and surgeon. A partial transposition, however, is often troublesome as it may interfere with the function of some parts due to malposition in relation to other organs.

Formerly the diagnosis had to be made at the operating table or at autopsy and many cases were overlooked, but today with the x-ray and electrocardiograph there is no excuse for a mistaken diagnosis and many more cases are being reported. This condition was first confirmed by x-ray in 1897.

A clinical picture of an abdominal lesion except as to location of the pain and the sensitive point should be a warning and the diagnosis should be cleared up by a fluoroscopic examination of the chest, a barium meal and barium enema.

At the operating table the appendix is sometimes found to the left of the mid line. I have found it so on several occasions but this is not conclusive evidence of situs inversus, as Lee calls attention to the fact that the cecum is in the left iliac fossa paralleling the descending colon until the third month of intrauterine life when it normally rotates to the right and occupies the right iliac fossa. If the rotation is incomplete or the cecum is freely mobile the appendix may be to the left of the mid line though no situs inversus is present.

The subject is of much importance in abdominal surgery for as Pol pointed out in 1935 in reviewing forty-six cases of left side appendix more than half the cases complained of pain in the right lower abdomen.

The mechanism of referred pain is beyond the scope of this paper but we are all aware of the reflexes manifested in visceral disease. Usually pain produced by an irritated abdominal viscus is first referred to the epigastrium and later to the viscus involved or to the opposite side from the viscus involved. This could lead to much embarrassment to the surgeon as in more than one case a second incision has been made on the left side after failure to deliver a left side appendix through a McBurney incision. This dilemma was the experience of Pol in an eight year old girl. A left side gall bladder would be still more disconcerting.

The electrocardiograph will clear up the diagnosis in case of dextrocardia as lead one will be inverted and leads two and three will be transposed (see figure III), the x-ray is necessary in diagnosing transposition of the abdominal viscera.

The following case report is of Miss H. M. age nineteen, a college student. Entered hospital June

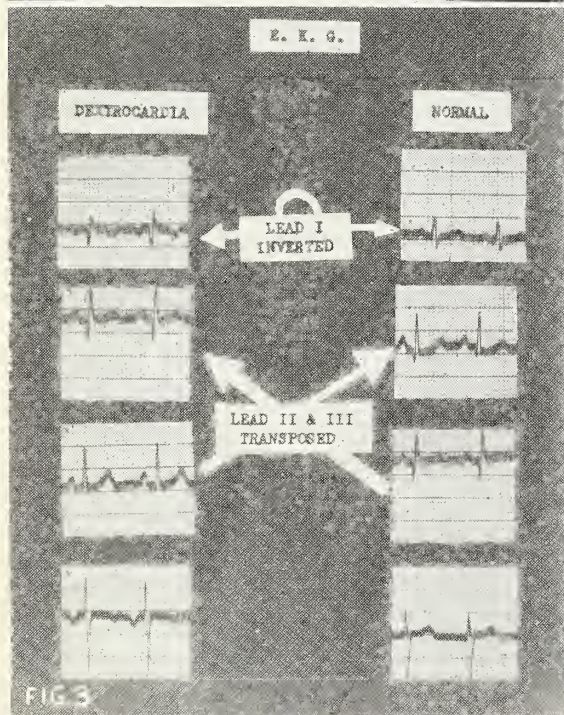
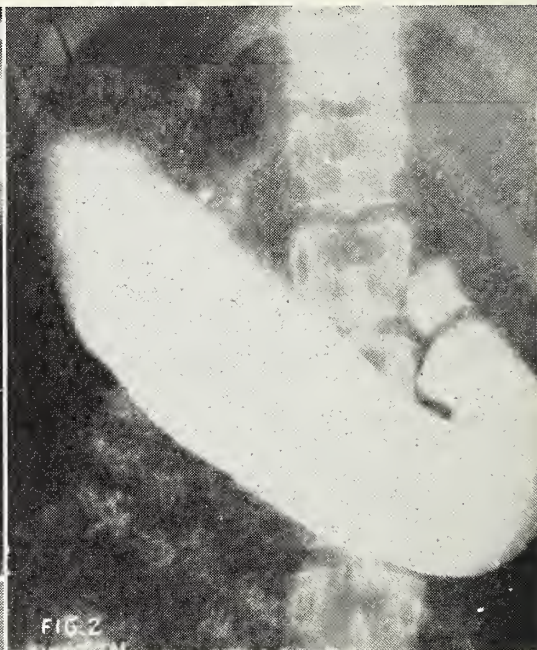
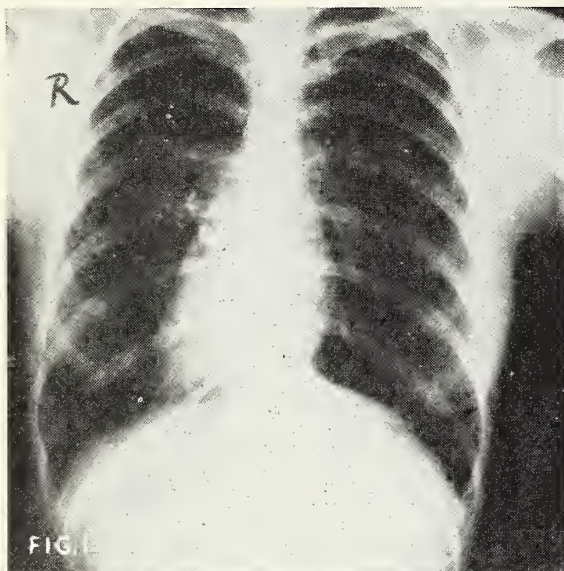
27, 1939. Temperature 102.6, pulse 108, Resp. 20. B. P. 110/70. Red cells 4,600,000. White cells 12,500. Polyneuculars seventy-nine per cent. Wasserman negative.

Has been complaining of pain in right lower abdomen last twelve hours. Had a similar attack about one year previously and was in bed several days.

The relevant points in the physical examination are as follows: Upper air passages clear, the maximum cardiac impulse is found in the fifth inter-

costal space in the right chest (see figure II). Heart is normal in sound and rhythm. The rate is in keeping with the temperature. There is rigidity in both right and left iliac fossa, but patient insists that the pain is mostly in the right side except on deep pressure when there is more on the left. No pelvic examination was made. At operation a right rectus incision was made and the Sigmoid was found in the right iliac fossa and the cecum in the left fossa (see figure IV).

The appendix was delivered without much difficulty



and the abdomen close. Recovery was uneventful. The x-rays and electrocardiographs are herewith presented.

I wish to acknowledge my indebtedness to Dr. P. W. Morgan for the electrocardiographs.

ACUTE ASCENDING PARALYSIS

(LANDRY'S PARALYSIS)

Ralph L. Drake, M.D.

Wichita, Kansas

The purpose of this paper is to call attention to the clinical and pathological features of acute ascending paralysis and its importance from the diagnostic and prognostic standpoint.

This is a condition with which the general practitioner should be familiar as it is met with in association with so many and varied disease processes.

Acute ascending paralysis has no common etiological factor. Cases of this type occur in association with acute anterior poliomyelitis, influenza, pneumonia, the acute infectious diseases of childhood, typhoid fever, syphilis and gonorrhea, the puerperium, herpes zoster, hematuria, small pox, and anthrax. It has been reported in cases of post-vaccinal and posterythematous encephalomyelitis. Various observers have called attention to its development following the bite of a wood tick. May¹ reports a case of acute ascending paralysis occurring in peripachymeningitis suppurativa. Another interesting case has been cited by Kornyei² in which the patient suffering already from Hodgkin's disease developed an acute ascending paralysis in association with Korsakow's syndrome and hematuria. In this case the combination of acute ascending paralysis with Korsakow's syndrome excludes an acute inflammatory origin.

There is a varied opinion regarding the relationship between acute anterior poliomyelitis and this form of paralysis. Some observers feel that acute ascending paralysis is a form of poliomyelitis, while others believe that it is not due to the virus of poliomyelitis but to some form of toxin with an affinity for the peripheral motor neurons. Pette and Kornyei³ state that the epidemiology of the disease and the general histopathological picture renders it likely that the causative agent closely resembles biologically the agent of the acute inflammatory diseases, especially of the gray matter, as anterior poliomyelitis, epidemic encephalitis, and Bornu's disease.

We know that hematuria plays a definite role in the pathogenesis of the toxic form of this

condition. Courville and Mason⁴ have reported such a case and the author has recently seen a similar case through the courtesy of Dr. Harold Palmer of Wichita, Kansas. Blum and Schumacher⁵ report an interesting case of acute ascending paralysis in which there was an abnormal sensitivity to light associated with an erythematous dermatitis of the face, hands, and arms preceding the paralysis. Since naturally occurring porphyrins are suspected of being photosensitizers in man, the authors discussed the possibility of its being the causative agent in their case but tests for its presence were negative.

The occurrence of an acute ascending paralysis in association with herpes zoster is also of interest. Schuback⁶ and Wohlwill⁷ have reported such cases. In Schuback's case the pathological findings included a combination of inflammation and degeneration of the spinal cord, while in that of Wohlwill the peripheral nerves and intercostal nerve and ganglion suffered degenerative changes.

CLINICAL SYMPTOMS

This syndrome usually follows a rather typical course. It is more often encountered in the 3rd and 4th decades. In the early stage there may be no evidence of infection, but when this is present there is usually a rise in temperature ranging from 100 degrees to 103 degrees. This is frequently accompanied by headache, vomiting, and generalized pain. These symptoms soon subside, however, and the patient apparently recovers for a time. After this interval, varying from several days to as long as six weeks, there is most commonly a sudden onset of weakness in one or both lower extremities. Often the patient notices that his legs are weak after walking a short distance, and he is then obliged to rest. He finds that he is unable to rise and both lower extremities show marked weakness or complete paralysis. At this time he may complain of back or leg pain. The paralysis then extends upward involving the trunk muscles and in a day or two the arms become paralyzed. Then, there often follows a paralysis of one or both sides of the face, or there may be inability to move the eye outward due to involvement of the abducens nerve.

The process extends and a bulbar paralysis commonly results. Although the paralysis of the extremities is often complete, at times the patient is able to move the toes and fingers. The sphincters are not affected in the great majority of cases. Objective sensory disturbances are rare. The laboratory findings are of no aid in the diagnosis. There may be a mild leukocytosis and the blood cultures may show such organisms as streptococci, various diplococci, pneumococcus, and others. The cerebrospinal fluid shows no typical change.

PATHOLOGICAL FEATURES

These may be classified under two groups: 1. Pure degenerative changes of toxic origin. 2. Those which show more or less definite signs of inflammation. Pette and Kornye³ differentiate in the second group between the cases predominantly of a central localization of the process and those with predominance of a peripheral involvement. The cases with predominant central localization of the process may be considered as atypical forms of the well known infectious diseases as poliomyelitis and rabies. On the other hand, the cases with a predominant peripheral localization cannot be associated or combined with any known definite disease.

Pette and Kornye cite two cases of this latter type. The first was in a male, age forty-two, who developed weakness of both lower extremities and within two days the arms were paralyzed. Paraesthesiae were present in the feet and hands but the sensory symptoms were not marked. Sphincter loss followed and death occurred on the 7th day. Necropsy revealed a lymphocytic and plasma cell infiltration of the spinal ganglia and nerve roots. The spinal cord showed no involvement. The second case was in a male, age twenty-four, who suddenly developed acute ascending paralysis. Sphincter control became lost and death occurred on the 6th day. Necropsy revealed marked ectodermal changes in the spinal ganglia and nerve roots of a degenerative character. The central nervous system was unaffected.

REPORT OF THREE CASES

In one case a male, age seventy-two, developed an attack of slight fever, nausea and vomiting, which necessitated rest in bed for three days. He was apparently well for two weeks when he developed an acute ascending paralysis with involvement of the left side of the face. Death occurred from bulbar paralysis five days later. Necropsy revealed degenerative changes in the anterior gray matter of the spinal cord at all levels. The roots and peripheral nerves were not involved. Cells of the hypoglossal nuclei showed marked degenerative changes as well as the nuclei of the tenth and seventh cranial nerves.

A second case was in a male, age twenty-five, who fell on the ice, striking his right hip. One week later he developed pain in the right ilioinguinal nerve distribution, followed in three days by an acute ascending paralysis which affected both sides of the face. There were marked sensory disturbances in the form of muscular tenderness, pain and paraesthesiae. The medulla was not affected and within three months complete recovery occurred.

A third patient, age thirty, had an initial period of nausea, vomiting and diarrhea. This was followed in one week by a typical acute ascending paralysis

and marked sensory disturbances, subjective and objective in character. There was a left peripheral facial paralysis. This man gradually recovered over a period of eighteen months.

COMMENT

The main point to be considered in the diagnosis of this form of paralysis lies in determining whether the spinal cord and medulla are involved or whether the peripheral nerves are alone affected.

As a rule, the presence of marked sensory symptoms, both subjective and objective, is in favor of a polyneuritis in which the process does not involve the central nervous system but is limited to the peripheral nerves. Perhaps in some cases of the so-called polyneuritis there are changes not only in the peripheral nerves but also in the central nervous system.

Taylor and McDonald⁸ feel that the conditions variously termed encephalitis, acute ascending paralysis, poliomyelitis, infectious polyneuritis, neuritis, myeloradiculitis, and acute, benign infectious myelitis are all due to a common infective agent and should be regarded as varying manifestations of one disease.

The prognosis in acute ascending paralysis, as a rule, is very guarded. In those patients who survive, the paralysis remains stationary for a few weeks and then gradually disappears. The face and upper extremities usually improve first. Within a period of six to eighteen months complete recovery takes place.

How is one to determine an accurate prognosis in these cases? The most important aid lies in the presence of marked sensory symptoms. When these are present the outlook for recovery is much better than when they are absent or very mild. Another factor in the prognosis is the presence of a peripheral facial paralysis. When this occurs bilaterally, it is often a sign of a good prognosis.

The value of being acquainted with this syndrome consists in knowing that what may appear to be a benign multiple neuritis, may terminate fatally. The fact that many cases end fatally makes it imperative for us to recognize the condition at the earliest period, even though we may have a benign case of multiple neuritis that is due to alcohol, avitaminosis or some other toxic or infectious process.

BIBLIOGRAPHY

1. May, W. N., Royal Berkshire Hosp. Reports, 1:144, 1932.
2. St. Kornye: Deut. Zeit. fur Nervenheilkunde, 125:129, 1932.
3. Pette, H., and St. Kornye, Zeit. fur die ges. Neur. und Psych., 128:390, 1930.
4. Courville, C., and Mason, V. R., Arch. Neur. and Psych., 25:848, 1931.
5. Blum, H. F., and Schumacher, I. C., Annals Int. Med. 2:548, 1937.
6. Schuback, A., Zeit. fur die ges. Neur. und Psych. 123:424, 1930.
7. Wohlwill, H., Zeit. fur die ges. Neur. und Psych. 89:171, 1928.
8. Taylor, E. W., and McDonald, C. A., Arch. Neur. and Psych. 27:79, 1932.

CINCHOPHEN POISONING

M. G. Berry, M.D.

Kansas City, Missouri

The prescription of poisonous drugs by a physician is a serious violation of trust. That cinchophen is a poisonous drug has been established beyond any reasonable doubt. However, the fact that cases are still seen to whom cinchophen has been given and in some of whom toxic symptoms are present, indicates that the drug is still widely used.

The use of cinchophen continues because the first concern of the arthritic is the relief of his pain, and cinchophen does give relief. There is an undertone of gloom in most publications dealing with the treatment of arthritis. Nearly all of them devote a few lines to the use of drugs. In the last edition of the mostly widely used textbook on medicine in America¹, there is a small paragraph devoted to the use of drugs in the treatment of arthritis. Cecil recommends the prescription of

Acetylsalicylic Acid	gr. v
Amidopyrine	gr. iiss
Phenacetin	gr. iiss

Sig.—One capsule three times a day.

Beckman² devotes four and a half pages to the treatment of rheumatoid arthritis. In the ten lines devoted to relief of pain, he condemns morphine, dilaudid, and mentions codiene sulphate. He says "it is a rare case in which the salicylates are not used—unfortunately, the relief afforded is in many cases very slight."

With this background and the firmly instilled belief that any arthritic is being grossly mistreated unless he takes a series of treatments in a fever box belonging to some large hospital, the young physician discovers that cinchophen will relieve the patient's chief symptom: Pain. He can hardly be blamed if he continues the use of the drug until he poisons someone.

We merely state here that in nearly every case the pain of arthritis will be relieved by sodium salicylate in adequate doses.

The poisonous effects of cinchophen have been repeatedly emphasized by many competent observers. Palmer and Woodall³ in 1936 collected 191 cases of cinchophen poisoning with eighty-eight deaths. They believe that the actual incidence of cinchophen poisoning is much greater than the reported cases would indicate.

Hench⁴, in reporting the first recorded observations of the analgesic effect of jaundice on arthritis, lists sixteen cases, in fourteen of which the jaundice was attributed to the previous administration of

cinchophen. Hench⁵ also states that "we must conclude from the basis of our present knowledge that if other available analgesics are effective, cinchophen products should be avoided."

Snyder⁶ of New York has never seen a case of liver damage due to cinchophen in 2500 cases treated with the drug.

Westphall of the Hertzler Hospital⁷ reports three cases of jaundice in patients treated with cinchophen and states that "we accept the view that the administration of cinchophen is not without some risk". However, he also says "nobody advocates that appendectomies be discontinued because the surgeon occasionally loses a case".

Hanzlik⁸ in an investigation of the pharmacological properties of cinchophen and sodium salicylate, found them identical in every way. However, sodium salicylate is not poisonous.

The experimental production of hepatic damage by cinchophen failed in the hands of Lehman and Hanzlik⁹ and Reicle¹⁰. However, Meyers and Goodman¹¹, Barbour and Fisk¹², and Churchill and Van Wagoner¹³ report the production of liver damage in rats, rabbits and dogs by cinchophen. The merits of these experiments need not concern us. In the past few years "Clinical Research" has performed an experiment a thousand times more extensive, with the same results^{3,4,7,14,15,16,17,18,19,20,21}. We know that extensive hepatitis occurs in a small fraction of cases.

The toxic manifestations of cinchophen are grouped by Weir and Comfort¹⁴ into the cutaneous, anaphalactoid, gastro-intestinal, cardiac, renal and hepatic. The less serious cutaneous or combined cutaneous and anaphalactoid are most commonly seen but it is the cases in which high grade hepatic degeneration occurs which are most spectacular.

We report the following two cases, seen less than two months apart, to call attention to the still prevalent use of poisonous cinchophen. The first is one of urticaria with some evidence of liver damage; the second is similar to many previously recorded—death due to cinchophen poisoning with extensive hepatitis.

Case 1.—E. D., fifty-six year old female, was admitted to St. Luke's Hospital on May 8, 1938, complaining of itching and eruption of the skin of two days duration. She had been given cinchophen, gr. fifteen, once a day for six days. Forty-eight hours prior to admission, her skin began to itch and appeared sallow to her husband. Twenty-four hours later, she noticed large hives over the whole body.

On admission to the hospital, her temperature was 102, pulse seventy-two. Examination showed an obese woman with large bullous hives on the face, trunk, arms, legs and soles of the feet. The liver was

distinctly palpable at the costal margin but not tender. The joints showed no abnormality except Heberden's nodes of all of the fingers and moderate limitation of motion of the right shoulder. Erythrocytes numbered 4,260,000, hemoglobin eighty-one per cent (fourteen grams), leukocytes 5,350 to 8,800 with polymorphonuclear leukocytes fifty-two per cent to fifty-seven per cent, lymphocytes forty per cent to forty-seven per cent, eosinophiles zero to three per cent. There was no bile in the urine; blood chemistry was normal; icterus index was eight to ten on seven examinations. The hippuric acid liver function test showed an excretion of 1.66 grams of hippuric acid as benzoic acid in four hours (normal—three grams).

The itching and urticaria gradually subsided in a week. The temperature varied between 102. and 99.6 for the first forty-eight hours, then between 99.6 and normal. She was given a high carbohydrate—low fat diet, sodium dehydrocholate and phenol-menthol lotion to the itching areas. Adrenalin in doses up to eight minims had no effect on the urticaria. She was dismissed from the hospital May 25, 1938, at which time she had apparently completely recovered.

Case 2.—W. W. K., fifty-three year old white male, barber, was admitted to St. Luke's Hospital March 20, 1938. He had been seen five years previously with mitral stenosis and moderate heart failure. Two and a half years later he had auricular fibrillation, a firm, non-nodular goiter, tremor, and exophthalmos. He had taken digitalis and Lugol's irregularly since then. While at work three weeks before admission, he had developed a cold and cough; two days later, he had a sudden pain in the left chest and shoulder which was aggravated by inspiration, for which he had been given an unknown number of capsules containing cinchophen. He had been irrational for two weeks and had vomited nearly every day during this time. He had cried out when touched anywhere below the neck. His ankles had been swollen for a week.

On admission, there was slight icterus, moderate dullness to percussion in the left base with a few moist rales. The heart was enlarged, the apex impulse visible one inch outside the midclavicular line. Dullness extended one inch to the left of the left sternal border in the third interspace. The fibrillating heart rate was eighty-four. Systolic and diastolic murmurs were heard at the apex; the pulmonary second sound was accentuated grade two. The liver was enlarged to one inch below the costal margin and moderately tender. Blood pressure 110/60, temperature 100.8. There was grade one edema of the ankles. He was grossly disoriented and confused. There was no evi-

dence of arthritis of any joint but there was tenderness of the anterior chest wall and of the left shoulder tip so that the patient cried out when these areas were touched.

The urine contained bile. Examination of the blood showed during the last thirty-four days of his life the following variations: Hemoglobin sixty per cent to seventy per cent; red cells 3,560,000; white cells 11,450 to 4,100; polymorphonuclears sixty-eight per cent to thirty-seven per cent; three blood cultures were negative; blood chemistry was normal except for an icterus index which rose from twelve on admission to sixty-four before death.

The chest was strapped on admission and most of the pain apparently let up. The next day the patient was more rational and definite shoulder tip tenderness was elicited. Injection of two per cent novocain into the tender areas of the chest wall and shoulder, gave complete relief for twenty-four hours. He had no more than slight pain after this injection at any time.

For a few days he improved on a high carbohydrate diet with sodium dehydrocholate and maintenance dose of digitalis. However, the temperature again rose, his liver become larger, he again lapsed into semi-coma, then coma, and died on April 24.

Postmortem examination showed: "The liver is somewhat lobulated and shrunken, and shows a thickened Glisson's capsule. It weighs 950 grams. Repeated cross section shows perilobular fibrous tissue increase and a diffuse atrophy having a yellowish-brown color suggesting a diffuse type of subacute atrophy.

"Various sections taken through the liver show central zone degeneration, considerable pigmentation involving the liver zone proper. Large deformed nuclei present in many of the degenerated liver cells indicate an attempt at regeneration. Some passive hyperemia is also present with degeneration of the central portion of the lobule.

"Pathological Diagnosis: Subacute yellow atrophy of the liver; chronic adhesive pericarditis, diffuse (complete synechia); old healed mitral stenosis; hypertrophy and dilatation of the heart; chronic adhesive pleurisy; confluent bronchopneumonia of the right lower lobe; interstitial hemorrhages of the lung with passive hyperemia of the lungs; chronic adhesive pericholecystitis; splenomegaly; advanced parenchymatous degeneration of the kidneys; generalized icterus."

In this case, the diagnosis of cinchophen poisoning was made before any information about his treatment prior to his admission to the hospital could be obtained.

CONCLUSIONS

1—The use of the drug cinchophen is not only dangerous but unnecessary.

2—We have presented two cases of cinchophen poisoning. Evidence of the continued use of this drug indicates a necessity for repeated warnings of its poisonous effects.

BIBLIOGRAPHY

1. Cecil, R. L.; *A Textbook of Medicine*; Philadelphia, W. B. Saunders Co. 1937; p. 1299.
2. Beckman, H.; *Treatment in General Practice*; Philadelphia, W. B. Saunders Co. 1938; p. 137.
3. Palmer, W. L. and Woodall, P. S.; Cinchophen: Is There A Safe Method of Administration; *J.A.M.A.* Sept. 5, 1936; 107: 760-4.
4. Hench, P. S.; The Analgesic Effect of Hepatitis and Jaundice in Chronic Arthritis; *Ann. Int. Med.* April 1934; 7:1278-1294.
5. Hench, P. S.; Derivatives of Cinchophen and Their Toxicity; *Proceedings of Staff Meetings of Mayo Clinic* July 20, 1932; 7:427-428.
6. Snyder, R. G., Traeger, C. H., Zoll, C. A., Kelly, L. C., Lust, F. I.; Cinchophen in Treatment of Chronic Arthritis; *J. Lab. & Clin. Med.* Feb. 1936; 21:541-7.
7. Westfall, G. A.; Toxicity of Cinchophen; A Clinical Study; *J. Kansas Med. Soc.* Aug. 1936; 37:311.
8. Hanzlik, P. J.; Antirheumatic Remedies; *N. W. Med.* July, 1929; 28:293-298.
9. Lehman, A. J. and Hanzlik, P. J.; Cinchophen Toxicosis; *Arch. Int. Med.* Sept., 1933; 52:471-92.
10. Reichle, H. S.; Cinchophen Poisoning; *Arch. Int. Med.* Feb., 1932; 49:215-220.
11. Myers, H. B. and Goodman, L.; Cinchophen Hepatitis: An Experimental Study; *Arch. Int. Med.* June, 1932; 49:946-9.
12. Barbour, H. G. and Fisk, M. E.; Liver Damage in Dogs and Rats After Oral Administration of Cinchophen, Tolsyn and Sodium Salicylate; *J. Pharmacol. & Exper. Therap.* 48:341-357, July, 1933.
13. Churchill, T. P. and Van Wagoner, F. H.; Cinchophen Poisoning; *Proc. Soc. Exp. Biol. & Med.* 28:581, March, 1931.
14. Weir, James E. and Comfort, M. W.; Toxic Cirrhosis Caused by Cinchophen; *Arch. Int. Med.* Nov. 1933; 52:685-724.
15. Rabinowitz, M. A.; Toxic Hepatitis and Hepatolysis Following the Use of Atophan; *Med. Clin. N. America* Jan., 1928; 11: 1025-41.
16. Permar, H. H. and Goehring, H. D.; Cinchophen Poisoning; *Arch. Int. Med.* Sept., 1933; 52:398-409.
17. Johnson, E. T.; Cinchophen Poisoning; *J. Missouri M. Assn.* Jan., 1933; 30:22-24.
18. Bloch, L. and Rosenberg, D. H.; Cinchophen Poisoning; *Am. J. Digest. Dis.* Sept., 1934; 1:433-7.
19. Peluse, Samuel; Cinchophen Poisoning with Autopsy; *J.A.M.A.* Sept. 28, 1935; 105:102.
20. Boros, E.; Hay Fever and Asthma During and After Jaundice and Ascites Due to Cinchophen Poisoning; *J.A.M.A.* July 10, 1937; 109:113-115.
21. Ingham, D. W.; Toxic Cirrhosis of the Liver Due to Hydrocin; *J.A.M.A.* Dec. 9, 1933; 101:1878-1879.

SACRALIZATION OF THE COCCYX

Henry G. Hadley, M.D.

Washington, D. C.

There are all grades from a fibrocartilaginous union to a complete fusion. Le Double¹ describes four grades. The first is reciprocal fusion of the vertebral body with the two cornua. The second is a unilateral fusion of a transverse process; the third, bilateral with the second vertebra assuming the characteristics of the first; the fourth grade, a complete assimilation of the first coccygeal vertebra into the sacrum with the second sacral assuming the character of the first. Dieulafe² observed complete sacralization in fourteen per cent and intermediate forms

totaling fifty-nine per cent. Leonard Da Vinci³ found 52.08 per cent of abnormal forms.

Guiseppe⁴ found the whole body of the first vertebra fused with the sacral apex in 10.12 per cent; the coccyx united with the base of the right horn in eighty-nine per cent; the left horn in 3.27 per cent; with the middle of the body in 8.33 per cent; complete sacralization in 21.13 per cent. The left-sided fusions seem to predominate.

BIBLIOGRAPHY

1. Le Double, A. F.; "Traite des variations de la colonne vertebrale de l'homme," Paris, 1912, pp. 356-357.
2. Dieulafe, R.; "Le coccyx," *Etude Osteologique arch. d. anat., Hist. et Embry.* XVI, 1933, p. 65-76.
3. Da Vinci, Leonardo; "Misure e proporzioni del corpo umano seconda Leonardo," *Atti R., 1st Ven. di Sc. Lett. ed arti T., LXXVIII*, p. II, 1918, pp. 162-182.
4. Guiseppe, Favarò; *Boll della Societa Med. Chirurg di Modena*, 1934, 34:23-29.

The case of private practice: "In the issue for May of Nation's Business appears a special supplement entitled 'The Case for Private Medicine,' The Journal of the American Medical Association for May 11 says.

"It is a twenty-four page story of the campaign that has been waged in recent years to force the medical profession into regimentation, and of the manner in which this campaign has been combated by the medical profession. It discusses also the state of health of the nation, and the reasons why medicine in a democracy should not be submitted to bureaucratic control. The supplement called 'The Case for Private Medicine' is the fifth of a series which this magazine has been making available, the previous supplements covering 'insurance,' 'Investment Banking,' 'Power and Light' and 'Distribution.' Reprints of the pamphlets covering 'Distribution' and 'The Case for Private Medicine' are available through the Nation's Business at 10 cents a copy or \$6 a hundred, which just about covers the cost of printing. Every physician should become familiar with this item; it may be had by writing to the Nation's Business, United States Chamber of Commerce Building, Washington, D. C. This periodical, which incidentally is the official organ of the Chamber of Commerce of the United States, itself circulates 350,000 copies to members of that organization.

"In presenting this article the Nation's Business provides first an adequate statement under the title 'Give the Doctors a Hand,' pointing out that it is the duty of commerce to aid medicine in resisting the march of collectivism. The article as a whole is prefaced by the statement made by Prince Otto von Bismark, the father of social insurance, who said:

"A beginning must be made with the task of reconciling the laboring classes with the State. Whoever has a pension assured to him in his old age is much more contented and easy to manage than the man who has no such prospect. Compare a servant in a private house and one attached to a Government office or to the Court; the latter, because he looks forward to a pension, will put up with a great deal more. . . ."

"There are also numerous illustrations and a wide variety of quotations from writings that have been published on the subject. Every one will find this the most interesting document that has yet been made available in medicine's campaign for freedom."

President's Page

To the Members of The Kansas Medical Society:

The medical preparedness campaign inaugurated by the American Medical Association working in cooperation with the Council on National Defense is well under way. Two thousand seventy questionnaires were mailed to doctors of medicine in Kansas. To date nine hundred and seventy-one questionnaires have been completed and forwarded to the American Medical Association headquarters. This represents a slow return, and every possible effort should be made by those who have neglected to fill in their questionnaires to do so immediately and forward same to the office of the American Medical Association in Chicago. If you have lost your questionnaire form please communicate with the Executive Secretary of the Kansas Medical Society at once, and you will receive a questionnaire by return mail.

There will of necessity be considerable follow-up work to be done in getting the questionnaires properly filled in and returned. Let us not allow this preliminary phase of the program to delay in the further work that lies ahead. Kansas medicine must be and will be in the vanguard in the furtherance of this entire program.

Sincerely,

Forren Loveland M.D.

President, The Kansas Medical Society.

EDITORIAL

SPONTANEOUS PNEUMOTHORAX

For the past thirty years spontaneous pneumothorax has been recognized as a distinct clinical entity. It was at first thought to be a symptom of pulmonary tuberculosis just as pleurisy with effusion is looked upon as a symptom of subclinical tuberculosis.

It is now known that if a subpleural focus of tuberculosis ruptures into the pleural cavity an entirely different group of symptoms develop and that spontaneous pneumothorax cases clear up uneventfully and do not develop tuberculosis in later life, that is not more frequently than is expected in the general population. Autopsy studies have been scarce because they seldom die.

Kjaergaard¹ has concluded that the probable cause in all instances of spontaneous pneumothorax is the rupture of subpleural vesicles which are the result of: (1) localized emphysematous changes in the lung; (2) scar tissue in the lungs, or pleural adhesions; (3) congenital cystic disease of the lungs. To these Hamman² has added a fourth: rupture of the mediastinal pleura when there is mediastinal emphysema.

Mediastinal emphysema represents an extension of interstitial pulmonary emphysema to the mediastinum. Distention of the mediastinal tissues is accompanied by severe substernal pain, radiating to the neck and shoulders. A sensation of pressure beneath the sternum, absence of constitutional symptoms, diminished or completely obliterated heart dulness, often subcutaneous emphysema in the neck, x-ray evidence of air in the mediastinum are the characteristic symptoms. Hamman offers experimental and circumstantial evidence that the thin mediastinal pleura is easily ruptured and that future work may prove this mechanism to be a not uncommon one in the production of spontaneous pneumothorax.

1. Kjaergaard, H.: *Pneumothorax simplex*. *Acta Med. Scan.* 1933, 80, 93. Quoted by Hamman.

2. Hamman, L.: *Note on mechanism of Spontaneous Pneumothorax*, *Ann. Int. Med.*, 1939, 13, 928.

REPORT OF COMMISSION ON GRADUATE MEDICAL EDUCATION

Qualified specialists who are not registered by their respective specialty boards will be well advised to read the following report and especially the paragraph preceding the last one.

"Important developments in the hospital internship, the hospital residency and the postgraduate educational opportunities for physicians in practice were suggested by the Commission on Graduate Medical Education, whose final report was published on June 25. The Commission, which was organized by the Advisory Board for Medical Specialties on December 4, 1937, is now bringing to a close its three year study program. Its work has been financed by national foundations and interested professional organizations.

The internship, suggests the Commission, should be considered as a basic preparation for the practice of medicine. It should round out and give practical application to the medical school course and, hence, should be closely allied to undergraduate medical education. It should prepare young physicians adequately to begin general family practice and should provide them with the essential preparation necessary to undertake further study leading to the practice of a specialty. It should not attempt to train men for the specialties directly and, therefore, the intern should not be given training in the detailed technics of the specialties.

To prepare the intern for general practice, he should have experience in internal medicine, pediatrics, obstetrics and gynecology, and surgical diagnosis, minor surgery and treatment of emergencies. Special attention in these fields should be given to preventive medicine and the care of chronic diseases, conditions of the aged and functional disturbances. The whole atmosphere should be educational in character and the intern should learn by example as well as precept.

The residency is defined by the Commission as a prolonged period of study in one of the special fields which can be properly classed as graduate education, whether an advanced degree is granted or not. The Commission warmly supports the recommenda-

tion of the Specialty boards that adequate attention be given during the residency to the basic sciences as they relate to the various specialties. It suggests practical ways by which hospitals may provide this basic science training in their own laboratories or through arrangements with medical schools. The report suggests that there is danger that too many residencies may be developed and stresses that, in the best interests of the patient, high quality of teaching in the residency is now more important than a large increase in the number of residencies. The essentials of a satisfactory residency are listed in some detail, although the Commission takes pains to point out that it does not wish to standardize residencies or put them in a strait-jacket.

Postgraduate education the Commission defines as study intended to keep a physician abreast of his chosen field of practice but not intended to equip him to enter a new field. Separate and clearly defined types of work are recommended for general practitioners and for specialists. While there has been a marked and rapid increase in interest in the field of postgraduate medical education, there is still need for its further extension and for improvement in the type of opportunities offered. The report points out the advantages and disadvantages of the various types of training now provided.

The effect of the work of the specialty boards upon the practice of medicine is discussed in the report, which points out that these boards have provided a well defined yardstick for measuring an individual physician's competence in his specialty. Men in the specialties have been certified so rapidly that it soon will be possible for the great majority of the people of this country to have access to the services of certified specialists.

The entire report stresses the value of adequate training and points out that this will be reflected in improved care of patients."

INSULIN SHOCK AND CEREBRAL DAMAGE

Many psychic and neurologic symptoms have been observed in the spontaneous hypoglycemias. The introduction of insulin shock therapy for schizophrenia has led to the observation of many

cerebral complications. Permanent damage of the brain has been reported in severe diabetics who required large doses of insulin and who had repeated hypoglycemic episodes.

With the introduction of protamine zinc insulin, and the prolonged hypoglycemic symptoms lasting for hours or days, in spite of repeated dextrose injections, many more instances of cerebral damage and death have been reported.

Klein and Ligterink¹ have reported the case of a twenty-two year old male, who was diabetic and was treated with regular and protamine insulin. He was found in coma which persisted for six days and survived with the mental level of an idiot.

The writer has seen a similar occurrence in a middle aged, insulin resistant diabetic with hepatic disease. She was treated with protamine insulin which relieved the intense pruritis and she then decided to sleep late into the morning without breakfast. After one week on this regimen, she was found in profound coma. The coma persisted for four days but on recovering, she was restless, did not recognize relatives, ataxia was marked, the speech was incoherent, and many neurologic abnormalities developed. The patient died two months later and required constant attendance while she survived.

The danger to the brain should always be borne in mind in the routine use of insulin for the treatment of diabetes as well as in its use for the Sakel shock therapy of psychoses.

1. Klein, F. and Ligterink, J. A.: Arch. Int. Med., 1940, 65, 1085.

TUBERCULOSIS CONTROL

BRONCHOSCOPY IN TUBERCULOSIS*

John C. Sharp and C. B. Gorham

Bronchoscopy is not contraindicated except in cases of (1) acute laryngeal tuberculosis; (2) recent extensive hemorrhage; (3) far advanced tuberculosis with toxemia and cachexia. Even these contraindications may be considered only relative in

*From Tuberculosis Abstracts, August, 1940. Routine Bronchoscopy in Tuberculosis by John C. Sharp and C. B. Gorham, Amer. Review of Tuberc., Vol. XLI, No. 6, June 1940.

isolated cases. Bronchoscopy in the tuberculous is now an accepted procedure by many phthisiologists and bronchoscopists.

The indications for bronchoscopy have been listed (1) as a diagnostic procedure for differential diagnosis; (2) as a diagnostic study in proved cases of tuberculosis with certain signs and symptoms; (3) to assist in carrying out endobronchial procedures, such as the instillation of opaque media or for therapeutic purposes.

TRACHEOBRONCHIAL TUBERCULOSIS

There are apparently two methods of the development of tuberculous tracheobronchial lesions; by continuity through direct extension from neighboring structures as through the lymphatics, and by the implantation of bacillary sputum on the mucosa. Several types of lesions have been observed, namely, (1) the diffuse and nodular mucosal or submucosal lesion, (2) ulcerative lesions, (3) fibrostenotic lesions, and various combinations of these.

A wide variation in incidence has been reported by various writers. One group of workers found tuberculous tracheobronchial lesions in forty-one per cent of autopsies of tuberculous cases and another worker reports only 4.4 per cent tuberculous lesions in the major bronchi.

The development of the bronchoscope has stimulated the study of tuberculous tracheobronchitis in the living, not only from the diagnostic viewpoint, but also in relationship to pulmonary disease, as well as with regard to the therapy of the local lesion.

The symptoms of tracheobronchial tuberculosis are wheezing or asthmatic attacks, paroxysmal attacks of intractable coughing with production of variable amounts of thick tenacious sputum at different intervals, dyspnea out of proportion to vital capacity with inspiratory stridor, cyanosis, constant clearing of the throat, persistently positive sputum in the absence of other evidence of pulmonary tuberculosis and intermittent atelectasis. It is apparent, in view of the experience of many and the recent extensive literature, that these cases should be bronchoscoped before any major surgical procedure for diagnostic reasons, as well as for therapeutic relief. It is also true that bronchoscopy should only be considered as a supplemental part of the complete examination of the patient. It also should be stressed that bronchoscopy should only be done by trained hands. A thorough knowledge of the anatomy of the structures involved is essential. It should be unnecessary to emphasize again that gentleness is of extreme importance, and that psychic as well as physical trauma of the patient must be avoided.

AUTHORS' EXPERIENCES

After describing the bronchoscopic appearance of lesions, treatment procedures and other considera-

tions discussed by various writers, the authors offer their own experiences. For the past two years all patients admitted to the Monterey County Sanatorium have been routinely studied by bronchoscopy, unless definitely contraindicated. Criteria were rigid and the findings of one observer were checked by the other. In a series of fifty-three cases definite tuberculous tracheobronchitis was found in thirty-seven per cent. Nearly all of the lesions were early mucosal and submucosal and most showed definite visible tubercle formation. The majority were on the posterolateral and posteromedial walls of the main bronchi on the side of the pulmonary lesion. In only three of twenty definite cases were there symptoms. All cases have been treated by local applications of thirty per cent silver nitrate, and all but one case have shown improvement on repeated examination and treatment, with apparent definite healing in six. Healing has been interpreted by a flattened and normal appearing mucous membrane at the site of the previous lesion. In one other case a recurrence of the tracheobronchial ulceration occurred three months after there was apparently definite healing. Several cases with negative findings have been bronchoscoped, subsequent to collapse procedures, for check-up on persistently positive sputum and no bronchial lesion was found.

There were no complications attributable to bronchoscopy and no apparent ill effects in over 100 examinations. Patients accept bronchoscopy as a matter of routine. Carefully performed bronchoscopy is a relatively simple procedure which carries practically no risk, and yields a considerable amount of valuable information.

SUMMARY AND CONCLUSIONS

1. Tuberculous tracheobronchitis has an important bearing on the prognosis and treatment of pulmonary tuberculosis.
2. Advanced and progressive ulcerative or stenotic lesions are serious complications.
3. Little is known of the evolution of early lesions and this is extremely important if they become progressive.
4. Early lesions occur without the classical symptoms of obstructive lesions.
5. Bronchoscopy of the tuberculous, unless definitely contraindicated, is simple and practically harmless, when performed carefully and gently by trained workers, and complications are rare.
6. Bronchoscopy is a routine procedure in many institutions before certain major surgical procedures and is becoming more so.
7. It is suggested that more bronchoscopic examinations be done on patients in sanatoria, not only to enrich our knowledge of tracheobronchial tuberculosis, but also with the more important view of a

more rational and better treatment of the patient.

8. There is no accepted method of treatment of tracheobronchial lesions, but thirty per cent silver nitrate locally applied seems to have some value, particularly in assisting in the healing of early lesions.

EYE, EAR, NOSE & THROAT

RECURRENT PAPILLOMATA OF THE CONJUNCTIVA

REPORT OF A CASE

L. G. Balding, M.D.

Manhattan, Kansas

Case: Colored female—age seventy-two.

History: About ten to twelve years ago, patient noticed a "little red dot" in upper medial quadrant of the bulbar conjunctiva. This grew slowly and was excised seven years ago. One year later or thereabout there was a recurrence of this growth which was more "puffy" than it had been the previous time.

Again the growth was removed, four years ago. Two years ago another growth started almost in the same place but a little higher and closer to the pupil.

When the patient came to see us the growth, which was the third in the same or nearly the same location, had doubled in size compared to the other growths. The sudden increase in size had begun about six months ago. Her father had a similar growth that was never excised.

Findings on examination of the eye: Tumor with its base on the upper and medial quadrant of the conjunctiva of the right eye at the limbus, growing across the cornea, although in no point did it originate from corneal tissue. The tumor is about the size of a dime, irregularly shaped and protrudes slightly through the palpebral fissure. The surface is convex distinctly granulated slightly vascularized. The color is pinkish red.

The tumor was completely excised and sent for examination to the University of Kansas.

The following pathological report was made by Dr. H. R. Wahl:

Gross Pathology—The specimen consists of a piece of tissue which measures ten by five by three mm. The piece is irregular in shape. The surfaces are rough and irregular. The tissue is soft in consistency and is very friable. It has grayish-white color and appears to be cellular.

Histological Pathology—The section shows an atypical growth of squamous epithelial cells which in some areas takes on a papillary type of architecture. Here there is a central core of loose and edematous fibrous tissue in which there are a number of dilated and congested vessels. A few scattered mononuclear cells are seen in this tissue. Surrounding this is a thick layer of partially differentiated squamous epithelial cells. The basement membrane appears to be intact and along this layer there is considerable variation in size, shape and staining. However, only an occasional mitotic figure is seen. Farther out the cells appear to be more differentiated; they are frequently elongated or spindle formed and many of them are polyhedral in shape. Most of the cells contain only a scanty amount of cytoplasm and no keratinization or pearl formation is noted. This epithelial layer is unusually vascular. The cells often rest directly against the blood spaces. A number of large balloon-shaped basophilic staining cells are seen scattered among the epithelial cells.

In other areas the papillary-like growths of epithelium are supported by a dense zone of hyalinized fibrous tissue. A small amount of secondary inflammatory reaction and some hemorrhage are noted in a few fields.

Diagnosis—Recurrent papilloma of the cornea with some suspicious epithelial hyperplasia. Not definitely malignant.

Etiology: According to Boehm¹ there are two contrary opinions as to the etiology of papilloma: (1) An inflammatory growth and (2) a tumor sui generis. He states that a tumor in contact with the limbus has to be considered of epithelial genesis, while a papilloma originating from the cornea without contact with limbus can only be caused by inflammatory processes of the cornea.

In the opinion of Doherty², vascularization brought about by inflammatory or traumatic processes is a most favorable soil for these growths.

Windham³ points out the strong relationship to chronic irritation, evidenced by their frequent localization in the palpebral portion and on developed or potential pterygia. He further maintains that the only cases he has seen were in dusty or windy parts of the country. In the opinion of Freytag⁴ papillomata may appear following the treatment of trachoma also.

In the case reported, the original growth was probably a pterygium and there has been enough irritation from dust to stimulate epithelial growth.

Differential diagnosis: Phlyctenules, pterygium and trachoma have been mistaken for papillomata. In rare cases hemangioma or lymphoma may show some similarity in their gross appearance.

The diagnosis will be indicated if the growth shows the characteristics as outlined by Doherty²; "Clusters of small papillae, pinkish red in color and of a raspberry, cauliflower or mushroom appearance. They are freely moveable, attached to their base by a firm pedicle, have a rich blood supply and bleed easily. The flattened mushroom type is produced in all probability by the pressure of the upper lid; and the raspberry like appearance is assured by those capable of protruding through the palpebral aperture".

As literature and experience teach, however, it will be advisable in most cases to postpone the final diagnosis until a histological examination has been performed.

This seems to be of especial importance in cases similar to the one reported. Although the growth appeared to be rather characteristic of papilloma in the macroscopic examination, three factors pointed to the possibility of malignancy; 1—Recurrence, 2—Increased speed of growing and 3—Increased size of third growth. It is known that these symptoms occur in histologically benign tumors and that most papillomata do not develop malignant characteristics. (Windham³).

At the same time, however, cases of distinct carcinomatous degeneration are reported in literature. (Summary by Doherty².) Between these definitely benign and malignant forms there are undoubtedly several cases which, similar to the reported one, show histological structures of questionable malignancy. These cases demonstrate the importance of a histological examination as the gross appearance would not afford any evidence of suspicious changes.

Treatment: There is general consent about the advisability of surgical removal. Considerable disagreement exists, however, in regard to certain methods of post operative treatment. Most authors are in favor of cauterization of the base or application of chemicals as trichloroacetic, chromic, nitric, and dichloroacetic acids.

Radio therapy is advised by Doherty² and Peter⁵ but disapproved by Boehm¹ and Windham³ who mentions that in one case it seemed to stimulate the growth. Radio therapy is more active than x-ray⁶ Leinfelder and O'Brien.

Those cases confined to the cornea were most easily cured. Those of the conjunctiva next and those of both conjunctiva and cornea or covering the limbus were the most difficult (Windham³).

In the reported case, surgical removal was followed by coagulation of the base. Ten days after excision the wound was treated without complications and the normal appearance restored.

BIBLIOGRAPHY

1. Boehm, Ztschr. F. Angeuh: 1921 V. 45 No. 1, p. 22-28.
2. Doherty, A. J.: Ophth. Nov., 1932, p. 1016-1021.
3. Windham: Texas State Journal of Med. Vol. XXXII, p. 348-351.
4. Freytag: Archiv. of Ophth. 1915, V. 90, p. 367.
5. Gustav Peter: Radiology, Dec., 1935.
6. Leinfelder & O'Brien: Archiv. of Ophth., Aug., 1935, Vol. 14, p. 183-189.

MEDICAL ECONOMICS

INDIGENT CONTRACT

The Commissioners of Harvey county and the Harvey County Medical Society recently completed the following contract pertaining to the provision of indigent medical care in that county: As will be noted the agreement is particularly complete in scope and includes several unusual and effective provisions.

THIS CONTRACT, Made and entered into thisday of....., 19....., by and between the Board of County Commissioners of Harvey County, State of Kansas, party of the first part, and certain duly licensed physicians and surgeons licensed by the Kansas State Board of Medical Registration and Examination and residents of Harvey County, parties of the second part.

WITNESSETH, That it is mutually understood and agreed between the parties hereto:

1. DEFINITIONS. That "assistance case" as herein used shall mean a unit of one or more dependent persons receiving assistance from Harvey County, Kansas, as such unit, as defined by 39-702 G. S. 1935, 1937 Supp., and acts supplemental and amendatory thereto, and as defined by rules and regulations of the Kansas State Board of Social Welfare.

2. EMPLOYMENT AS COUNTY PHYSICIANS. That the said party of the first part, in consideration of the agreements of the parties of the second part, hereinafter stated, agrees and covenants with said parties of the second part to employ said second parties as official agents of Harvey County, Kansas, at the rate of compensation hereinafter set out, to do and perform as county physicians and surgeons any and all necessary services required of the public for medical and surgical care of assistance cases, except as herein-after provided.

3. RATE OF COMPENSATION. That in consideration of the services to be rendered by parties of the second part, as hereinafter set out, party of the first part agrees to pay unto parties of the second part, or their duly authorized agent, the sum of \$4200.00 per year, or proportionate fractional part thereof in event of prior termination.

4. THIRD PARTY BENEFIT. That this contract is made especially for the benefit of assistance cases of Harvey County, Kansas, and that all Old Age Assistance Cases, Aid to Dependent Children Cases, Blind Assistance Cases and Cash General Assistance Cases may receive the benefits of medical and surgical services, as herein set out, from parties of the second part, if they choose to do so.

5. **SERVICES AS COUNTY PHYSICIANS.** That in consideration of said employment and the payment of said compensation, parties of the second part agree to furnish any and all necessary medical and surgical care to the approved assistance cases of Harvey County, Kansas, and to do and perform as County Physicians any and all acts and perform any and all necessary services required of the public for care of assistance cases, during the term of this contract, except as hereinafter provided.

6. **EXCEPTED SERVICES.** That the services of parties of the second part, as set out in the preceding paragraph, and for which the aforesaid compensation is paid, shall not include any of the following:

Surgery and treatment not within the customary and usual practice of parties of the second part; surgery and treatment for which necessary equipment, facilities, or incidentals are not available in Harvey County, Kansas; dentistry; hospitalization; laboratory fees while patient is in hospital; drugs and prescriptions; x-ray; obstetrical cases unless paid for as set out in paragraph number twenty-three; treatment for crippled children who are eligible for treatment under the Kansas Crippled Children's Act; and treatment for injuries received in the course of work project employment for which provisions are made by the United State Employment Compensation Commission.

7. **PHYSICIANS COMMITTEE.** That parties of the second part shall select a committee of three (3) members from among their number, hereinafter referred to as the Physicians Committee, who shall represent said second parties in cooperating with party of the first part in attempting to settle any dispute or misunderstanding which might arise between assistance cases and parties to this contract, or between the parties to this contract, and such other and further functions as hereinafter set out.

8. **AGENCY.** That for the purpose of this contract, party of the first part hereby designates the County Director of Social Welfare as the agent of party of the first part in carrying out the provisions of this contract; and parties of the second part hereby agree to designate in writing an agent for the purpose of accepting payments for services, for and on behalf of second parties, and whose receipt therefor shall be binding upon said second parties; and for the purpose of keeping clerical records and making such reports as may be required elsewhere in this contract. That either party may revoke said agency, and second parties may name a new physicians committee, mentioned in preceding paragraph, upon ten (10) days' notice in writing to the agent, herein named, of the other party to this contract.

9. **CHOICE OF PHYSICIANS.** That each assistance client shall have the privilege of choosing any physician or surgeon entering into this contract, and parties of the second part shall make no distinction in services rendered to the assistance clients and regular pay patients, except that such assistance clients who are ambulatory may be required to take their examinations and treatments on designated days or hours, as is compatible with the circumstances.

10. **TREATMENT OF NON-ASSISTANCE CASES.** That party of the first part will not be responsible for payment for services rendered persons or families not on county approved assistance list or supplements thereto, except emergency cases, for which, in the opinion of the physicians committee,

emergency treatment is necessary, and investigation by the County Director discloses that the case is eligible for assistance. In such cases the names will be added to approved list as of the month in which such emergency treatment was needed.

11. **RESERVATIONS.** That although parties of the second part cooperate in attempting to provide adequate attention for all assistance cases within the provisions of this agreement and in attempting to make available free choice of its numbers, they reserve the following rights for any or all of its individual number: To accept, refuse or discontinue attention to particular assistance cases included herein the same manner as in their usual private practice. To refuse calls to distant parts of county when other parties of second part are within shorter distance.

That party of the first part may likewise, at its option, refuse to include direct relief clients or families within this contract, or it may withdraw particular direct relief cases on ten (10) days' notice to proper agency of the party of the second part; provided, however, that should any relief case so withdrawn apply for medical attention and be eligible for assistance under the terms of this contract, the party of the first part agrees to pay for such care over and above the terms of this contract and in accordance with the fee schedule furnished by parties of the second part.

12. **HOSPITALIZATION.** That before any assistance case or client shall be hospitalized at expense of first party, the attending physician shall have the approval of both the physicians committee and the County Director. That party of the first part reserves the right to designate in which hospital said client shall be hospitalized, giving due consideration to choice of attending physician or surgeon. That in the event no designation is made by first part, the attending physician may designate which hospital, but he shall attempt as near as possible to help maintain an equal division of all assistance cases between the two local hospitals in Newton, Kansas, and the Halstead Hospital at Halstead, Kansas.

13. **ORDERS FOR MEDICAL AID.** That all assistance clients will be required to secure an order from the County Director when services of the parties of the second part are required by client. Such order will be issued for a month's service when it is deemed advisable by the attending physician. Otherwise, an order will be required for each visit.

14. **RECORDS AND REPORTS.** That on or before the 25th day of each month, the agent of parties of the second part shall furnish to the agent of first party a list of all assistance clients served during the preceding month, and such lists shall include the names, diagnosis of cases treated, and a brief statement of services rendered, and in addition thereto party of the first part shall furnish to agent of second party on or before the 10th day of each month, a list of approved assistance cases. Party of the first part shall furnish all necessary printed forms for the proper recording and reporting required by the terms of this contract, without cost to second parties.

15. **UNIT FEE SCHEDULE.** That parties of the second part shall furnish to the County Director within thirty (30) days after the acceptance of this contract a unit fee schedule which will be used by the doctors in pro-rating the compensation paid the second parties by party of the first part. This unit fee

schedule shall also include and establish a rate for all x-rays taken or furnished by second parties.

16. **X-RAYS AND DIATHERMY TREATMENTS.** That party of the first part agrees to pay for all x-rays taken in the treatment of assistance cases, in addition to the compensation hereinbefore set out, in accordance with the approved unit fee schedule as provided in the preceding paragraph. That party of the first part shall not be responsible for diathermy treatments; parties of the second part agree to assume the cost of such treatments as may be given without additional compensation from first party.

17. **MALINGERING CASES.** That the parties hereto will cooperate with each other to the best of their ability to attempt to control malingering and any other and all unnecessary demands upon the public so far as the same is consistent with the actual and necessary needs of assistance clients.

18. **FREE DRUGS AND FACILITIES.** That party of the first part agrees to cooperate with parties of the second part in securing, and parties of the second part agree to avail themselves of drugs, medicines and laboratory facilities furnished without cost by the State Board of Health, the State Laboratory and other agencies.

19. **COMPLAINTS.** That party of the first part agrees to notify promptly any physician operating under this agreement of any complaint of consequences which may be made to its members or its Social Welfare Director concerning any alleged professional misconduct of said physicians hereto.

20. **TRANSIENT CASES.** That treatment of transient cases shall be given at any time on approval by the County Director. Such names will be added to the approved list as of the month and payment made to the second parties accordingly.

21. **EPIDEMICS AND CATASTROPHES.** That in the event unforeseen emergencies arise, such as a severe epidemic or some catastrophe necessitating an unusual expenditure of money or professional effort beyond the implied intent of this contract, it is agreed that party of the first part will recompensate the parties of the second part in accordance with the additional expenditures of money and professional effort required; such payment to be in accordance with the unit fee schedule furnished the County Director by parties of the second part.

22. **OBSTETRICAL CASES.** Parties of the first part agree to pay, in addition to the above payment, unto said parties of the second part, the sum of \$15.00 for each assistance obstetrical case.

23. **LIABILITIES.** It is specifically understood and agreed that the physicians subscribing their names hereto are not partners and do not, by the execution of this agreement, assume any of the rights or liabilities incident to a partnership. It is further understood that each physician shall be solely responsible for his diagnosis and treatment of such patients as shall come under his care and any physician whose name is subscribed hereto shall not be held liable by any one for the negligence of any other subscribing physician, whether such negligence arises out of the treatment of patients pursuant to this contract or otherwise.

24. **TERMINATION OF CONTRACT.** That either party of this contract shall be privileged to terminate this contract by extending sixty (60) days' notice in writing of such intention to the agent, hereinbefore designated, of the other party at any time

after this contract has been in force for a period of four (4) months. Otherwise this contract shall be in full force and effect for the term of one year from and after the signing hereof. That it is mutually understood and agreed between the parties hereto that the death, disability or removal from Harvey County of any of the parties of the second part shall not terminate this contract nor effect the liabilities of the remaining parties hereto.

The United States birth rate dipped slightly last year after rising in 1937 and 1938, according to preliminary tabulations of the Census Bureau, Department of Commerce.

A total of 2,262,726 births occurred last year, resulting in a birth rate of 17.4 births per each 1,000 estimated population. In 1938, the birth rate was 17.6, based on 2,286,962 births. The rate in 1937 was 17.0.

The preliminary 1939 rate is approximately five per cent higher than the lowest birth rate recorded in the history of the birth registration area established by the Census Bureau in 1915. The low point was in 1933 when the rate was 16.5. Census officials cautioned that the slight increase reported in recent years cannot be taken as assurance that the gradual decline of the birth rate has been checked.

New Mexico, with a rate of 33.7, had the highest birth rate reported last year. Other states with high birth rates were Arizona, 26.0, Mississippi, 25.6, and Utah, 25.1.

The lowest preliminary rate reported last year was New Jersey where the rate was 13.0. Other states that had low birth rates were Connecticut, 13.5, Massachusetts, 13.6, and New York, 14.4.

Sixteen states and the District of Columbia showed an increase in the birth rate last year over 1938. A decrease during the same period was reported by twenty-seven states, and in five states there was no change. Greatest increases in the birth rate were reported for the District of Columbia, Delaware, Florida, and South Carolina. Largest decreases were shown in Mississippi, Arkansas, and Illinois.

Birth rates of the forty-eight states and the District of Columbia for 1939 and 1938 follow:

State	1939	1938	State	1939	1938
Alabama	21.4	21.4	Nebraska	16.4	16.4
Arizona	26.0	26.4	Nevada	19.2	18.7
Arkansas	17.4	18.2	N. Hampshire	15.6	15.4
California	16.8	16.5	New Jersey	13.0	12.9
Colorado	19.3	19.2	New Mexico	33.7	33.9
Connecticut	13.5	13.7	New York	14.4	14.6
Delaware	18.3	17.0	North Carolina	22.7	22.9
Dist. of Col.	22.4	20.6	North Dakota	18.6	18.5
Florida	19.4	18.6	Ohio	16.2	16.7
Georgia	21.0	21.0	Oklahoma	17.0	17.3
Idaho	22.4	22.9	Oregon	16.3	15.8
Illinois	15.0	15.6	Pennsylvania	15.8	16.3
Indiana	16.8	17.3	Rhode Island	15.3	15.5
Iowa	17.2	16.9	South Carolina	22.7	21.9
Kansas	15.6	15.9	South Dakota	16.6	17.1
Kentucky	20.7	21.2	Tennessee	18.4	18.5
Louisiana	23.1	22.9	Texas	19.6	19.6
Maine	17.4	17.8	Utah	25.1	25.5
Maryland	16.8	17.3	Vermont	16.6	16.5
Massachusetts	13.6	13.8	Virginia	19.6	19.8
Michigan	19.6	20.1	Washington	16.0	16.1
Minnesota	18.9	18.9	West Virginia	22.3	22.8
Mississippi	25.6	26.5	Wisconsin	18.5	18.8
Missouri	14.8	14.7	Wyoming	21.4	21.0
Montana	20.2	19.8			

NEWS NOTES

MEDICAL PREPAREDNESS

In accordance with a request received from the war Department, the American Medical Association and the various state societies are endeavoring at the present time to complete preparations for a National Defense Program. The first step in the preparation of this program consisted of the appointment of a Committee on Medical Preparedness by the American Medical Association and the preparation of a questionnaire form for completion by all physicians in the United States. The questionnaire will provide much important information which is not now available and it is believed that it will enable a much more effective and practical medical defense program to be prepared that has ever been accomplished previously.

State chairmen have also been appointed to assist in coordinating the activities of each state with those of the American Medical Association Committee. The chairman for Kansas is Dr. F. L. Loveland of Topeka. State society medical preparedness committees will also be organized and it is probable that similar county medical society committees will be utilized.

The major function of the American Medical Association Committee on Medical Preparedness will be:

1. Meetings devoted to consideration of problems involved in providing medical personnel for military, naval and civilian needs.
2. Consideration of the provision of medical personnel for physical examinations, particularly of young men who are conscripted for military service, young men assigned to vocational training, persons on relief and those concerned with war industries.
3. Consideration of economic problems including financial arrangements, leaves of absence, part-time service and other factors associated with civilian medical services.
4. To maintain contact and to represent the Association in conferences with the Surgeons General of the Army, Navy and Public Health Service and, when necessary, with other governmental agencies.
5. To maintain contact with the state chairmen on medical preparedness.
6. To encourage and coordinate the activities of the several state chairmen for the Committee on Medical Preparedness.
7. To formulate instructions for the guidance of state chairmen.
8. To review and to approve or disapprove recommendations received from state chairmen.

The state chairman will serve in the following capacities:

1. Contact with and coordination of the activities of state, county and district medical societies.
2. Cooperation with county medical societies in securing completion and return of the questionnaire on personal information.
3. To establish mechanisms for securing supplementary information to the questionnaire when necessary.

4. To organize a state or territorial committee on medical preparedness to be composed of the president and the secretary of the constituent state or territorial medical association, the state chairman for the Committee on Medical Preparedness and ex officio the member of the Committee on Medical Preparedness of the American Medical Association within whose Corps Area the state or territory is located and such other members as this group may select.

5. To assist in the organization of county committees on medical preparedness.

6. To invite local and state health authorities to participate in the work of the program particularly in the matter of civilian health.

7. To arrange for the dissemination of information on medical preparedness to the groups that are concerned with any particular matter.

8. To assist in the verification of the qualifications of physicians desired for service in the Army, industry, special physical examinations and other special work necessary for national defense.

9. To report to the Committee on Medical Preparedness a list of the names of physicians from each county of the state whose services are believed to be necessary for the maintenance of civilian health and who should, in the opinion of the state committee on medical preparedness, be exempt from military service.

The American Medical Association Committee at a meeting held on July 19 adopted the following resolutions which were forwarded to various government officials at Washington:

Whereas, The maintenance of the health of the workers in industry is essential to the defense program of the country; and

Whereas, The prevention of unnecessary illness of workers in industry is necessary to insure uninterrupted production of essential materials; and
Whereas, There exists a shortage in the number of physicians, chemists, mechanical engineers and other profes-

sional groups skilled in industrial hygiene; therefore be it

RESOLVED, That the Committee on Medical Preparedness of the American Medical Association recommends to the National Defense Commission that the necessary funds be furnished to the United States Public Health Service to provide the necessary training of physicians, chemists, mechanical engineers and other professional personnel in order to cope with the industrial hygiene problem in the present national emergency.

Whereas, The maintenance of the health of the nation is fundamental to its welfare; and

Whereas, The education and training of medical personnel requires long periods of time and special selection of men and women qualified to undertake such study; and

Whereas, It is necessary for such purposes to maintain continuous education of medical students; therefore be it

RESOLVED, That the Committee on Medical Preparedness of the American Medical Association requests the National Defense Commission, the military and naval services, the United States Public Health Service and the Congress, in preparing for the conscription of personnel, to provide for the continuation of medical education and

for exemption from conscription of all medical students and interns in accredited and approved institutions.

Whereas, There are many organizations interested in health and medical preparedness; and

Whereas, These organizations represent various specialties interested not only in the prevention but the treatment of disease; and

Whereas, Many recommendations and plans for medical preparedness will be made by these groups; therefore be it

RESOLVED, By the Committee on Medical Preparedness of the American Medical Association that we recommend to the President of the United States and to the National Defense Commission the immediate appointment of a medical coordinator of the activities of all medical service related to the national defense program.

The Society recently forwarded the following letter to all Kansas medical officers of the National Guard, the Army, the Navy and the Marine Reserve Corps:

It is the hope of Doctor Loveland, President, that the Society can be of assistance to Kansas medical officers of the National Guards, the Army, Navy, and Marine Reserve Corps in the event defense plans require their active duty for an extended period of time.

It is realized that these members may find it necessary to make a considerable personal sacrifice in the interest of national defense, and if this happens Doctor Loveland feels that the Society should assist to the fullest extent in making certain that this sacrifice is as small as possible.

If such is necessary and desired, it is believed arrangements can be made for interns, residents or other physicians to conduct member's practices during their absence or for county medical societies to assist in a similar manner.

Hence, if you are called to active duty, and if there is any assistance of any kind which can be provided, we hope you will call upon us and we assure you that everything within our power will be accomplished.

GAFNEY CASE

Mr. W. H. Edmundson, attorney for the Wilson County Hospital, filed a demurrer on July 19 in the case of Gafney vs. The Wilson County Hospital which is now pending in the Kansas Supreme Court.

The demurrer applies to the two remaining issues in the case—an alleged refusal to permit operation of a case of intestinal obstruction and an alleged refusal to permit delivery of an obstetrical case with medical methods.

It is believed that the demurrer may be acted upon during the next term of the Supreme Court.

POLIOMYELITIS

The following suggestions pertaining to the care of cases of acute anterior poliomyelitis have been issued by the Kansas State Board of Health:

"The weekly morbidity reports received from the county and city health officers over the state, indicate that cases of acute anterior poliomyelitis are on the increase. As the months, when this disease is most prevalent, are now at hand, every physician should be careful in his diagnosis of any suspicious case.

At the present time there is no proven method of im-

munization for the prevention of acute anterior poliomyelitis. Moreover, the numerous methods of medical treatment during the acute and subacute stages, have proven to be of little or no value.

Under the Kansas law the State Board of Health must supply physicians with convalescent serum at cost. The price is \$5.00 (Five Dollars) for 25 cc of serum. Supply depots are located at the following cities in Kansas.

Bellamy Drug Company, Colby.

Pearl's Drug Store, Garden City.

Johnson Clinic and Diagnostic Hospital, Chanute.

First National Pharmacy, Wichita.

Locke's Drug Store, Concordia.

Kuhn Drug Store, Dodge City.

St. Rose Hospital, Great Bend.

Lindburg & Gray Druggist, Pittsburg.

Kansas City Health Dept., Kansas City.

Palace Drug Store, Manhattan.

District Public Health Laboratory No. 1, Parsons.

Public Health Laboratory, Topeka.

Pending definite diagnosis of poliomyelitis and after diagnosis, even in the absence of definite weakness, the child should be kept at absolute rest in bed. During the acute paralytic stage, which lasts from two to seven days, medical and nursing care are essential, as is immediate regard for the orthopedic considerations, namely, placing the patient's muscles in the neutral or ideal rest position for protection of the entire body, so that stretching or strain of muscles and joint structures will be avoided. Stretching of the already weakened muscles will retard the recovery of function. By "stretching" is meant movement beyond the point from which the weak muscle can actively return the part to neutral position against gravity.

Protection against stretching is accomplished by wearing protective supports, care in the methods of handling the patient while receiving nursing attention, application of casts, or physical therapy treatments. Protection against strain is accomplished by preventing a weak muscle from attempting to hold or lift any weight great enough to cause the muscle to weaken further, whether the weight be the part itself or an activity or exercise. Fracture boards should be placed beneath the mattress.

The improvised protection used during the first few days should be replaced, as soon as possible, by more adequate protection, such as wire splints. In general, these supports are used until muscle sensitiveness disappears—a period of three to six weeks or more—unless contractures begin to develop, at which time firmer support in the form of plaster casts may be necessary.

Splints are especially valuable when the muscles are too sensitive for the application of plaster casts. They can be easily applied at home, thereby eliminating the fatigue of travel to a hospital, particularly if it is located at some distance. Application of the cast may be fatiguing. Frequently, patients make a spontaneous recovery during the first few weeks. In these instances, application of casts is an unnecessary procedure and the use of expensive braces is wasteful.

If the protection is delayed too long, great damage may be done, especially to the weak muscles, as contractures in the antagonistic muscles develop. A longer time is then required to regain the strength in the weak muscles, because the contractures must first be overcome. Mild heat in the form of compresses for short periods of time may diminish muscle sensitiveness. No other stimulative treatment is advisable for young children until about two months after onset of the illness. A detailed examination

should not be done until the muscle sensitiveness has practically disappeared. More permanent braces can be made after the examination."

The State Board of Health also recently surveyed the places of location of respirators in this state. The survey showed respirators located in the following places.

St. Elizabeth Mercy Hospital, Hutchinson.
Grace Hospital, Hutchinson.
Marysville Hospital, Marysville.
Jane C. Stormont Hospital, Topeka.
The Wichita Hospital, Wichita.
The McPherson County Hospital, McPherson.
St. Catherine's Hospital, Garden City.
University of Kansas Hospitals, Kansas City.
Murray Memorial Hospital, Dodge City.
Morrow Hospital, Liberal.

APPOINTMENTS

The Kansas State Board of Health has announced the appointment of Dr. Richard F. Boyd as Director of Local Health, a position left vacant since the death of Dr. R. B. Stafford. Dr. Boyd is a graduate of the University of Chicago School of Medicine and received his master's degree in public health from Harvard. His place as Assistant Director of Child Hygiene, will be filled by Dr. Paul R. Ensign, a graduate of the University of Kansas and the Northwestern University School of Medicine. Dr. Ensign has served with the Georgia State Board of Health during the past several years.

Mr. Thomas I. Dalton, former Assistant Chief Food and Drug Inspector for the Kansas State Board of Health was made Assistant State Registrar and Mr. Evan E. Wright, who has served as a Food and Drug Inspector for the past five years, was appointed as Assistant Chief Inspector of the Division of Food and Drugs. Mr. Harold Woolman, a milk sanitarian in the Food and Drug Division is now in charge of the newly purchased photocopy machine installed for the use of the Vital Statistics Division.

The newly appointed Food and Drug Inspectors are Mr. Ray K. Todd, registered pharmacist of Topeka, and Mr. George Seitz, who was graduated from the University of South Dakota School of Pharmacy. The appointments are temporary, subject to the merit system examinations.

CANCER EXHIBITS

The Kansas State Board of Health is assisting the Kansas Women's Field Army in the provision of lay educational information on the subject of cancer. A truck has been provided which will make a circuit of the state fairs and most of the county fairs for the showing of movies on cancer and for display of the new Kansas Women's Field Army exhibit. Arrangements have also been made to furnish the Women's Field Army with quantities of pamphlets and other literature.

NEWS LETTER

The Kansas State Board of Health News Letter, formerly a mimeographed publication, appeared in printed form effective with the July issue.

In addition to public health information, the publication will include reports concerning the activities of the Kansas State Board of Health.

BLIND PROGRAM

The following progress report pertaining to the medical blind program of the Kansas State Board of Social Welfare was published on June 30, 1940 by Dr. John A. Billingsley, of the State Ophthalmologist Association.

No. of the last eye report received.....	3,126
No. of eye examinations approved for Aid to the Blind,	1,927
No. of eye examinations not eligible for Aid to the Blind,	1,171
No. of eye examinations pending disposition,	22
No. of cases not accepted and No. was issued to report,	1
No. on the register not issued to cases between Nos. 1 and 3126,	5
No. of re-examinations made and fee allowed, ..	201

RESTORATION OF SIGHT PROGRAM

Total number of cases declared eligible for treatment,	781
No. of cases known to refuse treatment,	104
No. of cases under treatment,	121
No. of cases treatment has been cancelled,	24
No. of authorized treatments completed during June, 1940,	17
Total amount paid for treatments since initiation of program,	\$34,171.82
Total amount authorized for cases now under treatment,	12,294.65
Total number of cases completed with treatment,	380
No. of cases still eligible after treatment, ..169	
No. of cases ineligible after treatment, ....211	

PREVENTION OF BLINDNESS PROGRAM

Total number of cases eligible for treatment,	392
No. of cases known to refuse treatment,	2
No. of cases under treatment,	82
No. of cancelled treatments,	2
No. of authorized treatments completed during June, 1940,	20
Total amount paid for treatments since initiation of program,	\$ 6,824.82
Total amount authorized for cases now under treatment,	3,306.30
Total number of cases completed with treatment,	242
Total number of cases eligible for Aid to the Blind after treatment,	2
No. of cases still ineligible for aid to the blind,	240

MINUTES

The following are the minutes of the meeting of the Committee on Child Welfare:

A meeting of the Committee on Child Welfare was held in Topeka on June 30, 1940.

The following members were present: Dr. B. I. Krehbiel, Topeka, Chairman; Dr. E. C. Padfield, Salina; Dr. D. N. Medearis, Kansas City; Dr. T. J. Brown, Hoisington; and Dr. R. F. Boyd, Topeka. Dr. F. L. Loveland, Dr. F. P. Helm, and Clarence G. Munns were also present.

Following a discussion of school health and school health problems, and upon a motion made by Dr. Padfield, and carried, it was agreed that the chairman

of the committee and any others he desires should meet with representatives of the Kansas State Department of Education and the Kansas State Teachers Association to consider ways in which the Society can join with those groups in the establishment of a more extensive Kansas school health program.

Upon a motion made by Dr. Brown, and carried, it was decided that plans should be made to show the Mead Johnson Company movie, entitled "Bobby Goes to School" at area meetings of the Kansas medical profession, and the central office was instructed to attempt to obtain a copy of the film for that purpose. It was also decided that consideration should be given to the possibility of using talks given by Kansas pediatricians and explaining the aims and hopes of this committee in conjunction with the showing of the above movie.

Following a discussion of compulsory immunization and compulsory vaccination it was agreed upon a motion made by Dr. Belknap, and carried, that the committee shall recommend to the Kansas State Board of Health the possibility of providing compulsory vaccination and compulsory immunization in Kansas by means of a Kansas State Board of Health regulation rather than by statute. It was also the belief of the committee that such a regulation should include a provision wherein conscientious and religious objectors need not comply if they are willing to file a statement setting forth their objection and their willingness to accept responsibility for non-vaccination and non-immunization.

A suggestion was made that a survey should be completed showing the location of respirators in this state in order that such information may be available for emergency use and to enable the committee to give advice concerning the purchase of additional facilities of this kind. Dr. Boyd stated that he believed the Kansas State Board of Health would be glad to obtain this information for the committee.

The central office was asked to make inquiry of the Commonwealth Fund Foundation concerning its program for post-graduate instruction of pediatricians.

Dr. Padfield was asked to obtain information on quarantine regulations recommended by the American Academy of Pediatrics in order that the committee may give additional consideration to this question at its next meeting.

Dr. Brown was asked to study milk regulations in other states and to make a report on this subject at the next meeting of the committee.

Decision was made that the next meeting of the committee should be held in Salina during next September.

Adjournment followed.

Dr. L. F. Barney of Kansas City, chairman of the Committee on History, recently spent a day in Topeka inspecting medical history information available at the State Historical Society, the State House, and other places.

MEDICAL CORPS

The following communications have been received from the Surgeon General of the United States Army and from the Bureau of Medicine and Surgery of the Navy Department:

The physician, like every other American, has become actively interested in our national security and

stands ready to contribute his services as required for

The immediate problem in this connection is one that concerns the War Department, and primarily the young physician. The War Department must procure sufficient additional personnel from the medical profession to augment the medical services of the Regular Army as the various increases are made in the strength of the Regular Army, as authorized by Congress to meet the partial emergency. The young physician is especially concerned because it is usually advantageous, and is often more convenient for him to serve with the Army.

Present plans of the War Department are designed to make service attractive and instructive for the young physician. If the physician holds a Medical Corps Reserve commission he can be ordered to active duty if he so requests. If he does not hold a commission, but is under thirty-five years of age and is a comparatively recent graduate of an accredited school, he may secure an appointment in the Medical Corps Reserve for the purpose of obtaining extended active duty for a period of one year or longer. Duty is given at General Hospitals, Station Hospitals, and with Tactical Units, and embraces all fields of general and specialized medicine and surgery. Excellent post-graduate training is obtainable in connection with Aviation Medicine. After serving six months of active duty in the continental United States, a Reserve officer may request duty in Hawaii, Panama, or other United States territories and possessions. The initial period for duty is for one year and yearly extensions are obtainable thereafter until the international situation becomes more clarified and our domestic military program becomes stabilized.

Many young doctors who have served with the Army on extended active duty have taken the competitive examination for entrance into the Medical Corps of the Regular Army. Extended active duty affords an excellent opportunity for the physician to observe modern military medicine and the facilities that exist for a complete and comprehensive medical practice.

Pay is according to rank, and, including subsistence and quarters allowances for an officer with dependents, amounts to an annual sum of \$3,905 for a Captain and \$3,152 for a First Lieutenant; or, without dependents, to an annual sum of \$3,450 for a Captain and \$2,696 for a First Lieutenant. In addition, reimbursement is made for travel to duty station and return.

Further information may be obtained by writing to The Surgeon General, U. S. Army, Washington, D. C.

The next examination for doctors of medicine desiring to enter the Medical Corps of the United States Navy will be held on August 19, 1940 at the following Naval Medical Department activities:

U.S. Naval Hospital, Chelsea, Massachusetts.
U.S. Naval Hospital, Brooklyn, New York.
Norfolk Naval Hospital, Portsmouth, Virginia.
U.S. Naval Hospital, Pensacola, Florida.
U.S. Naval Hospital, San Diego, California.
Naval Medical Center, Washington, D.C.
U.S. Naval Hospital, Newport, Rhode Island.
U.S. Naval Hospital, Philadelphia, Pennsylvania.
U.S. Naval Hospital, Charleston, South Carolina.
U.S. Naval Hospital, Great Lakes, Illinois.

U.S. Naval Hospital, Mare Island, California.

U.S. Naval Hospital, Puget Sound, Bremerton, Washington.

Graduates of Class "A" medical schools who have had an internship in a civilian hospital and who are physically and professionally qualified may be commissioned in the permanent Medical Corps of the Navy as Assistant Surgeons with the rank of Lieutenant (junior grade). Applicants must be less than thirty-two (32) years of age at the time they receive their commissions, citizens of the United States, physically qualified for appointment as officers in the Medical Corps and must demonstrate their professional qualifications by competitive written, oral and practical examinations. The professional examination will embrace the subjects of: (1) General Medicine, (2) General Surgery, (3) Obstetrics and Gynecology, and (4) Preventive Medicine and Medical Jurisprudence.

The pay and allowances for Assistant Surgeons with the rank of Lieutenant (junior grade) in the Medical Corps of the Navy is \$2,699 per year if the officer has no dependents, and \$3,158 per year if he has dependents.

Additional information regarding physical requirements, etc., may be obtained by addressing a letter to the Bureau of Medicine and Surgery, Navy Department, Washington, D.C. Applications must be completed and received in the Bureau of Medicine and Surgery prior to August 1, 1940 in order that authorization may reach the applicant in sufficient time for him to appear for examination on August 19, 1940.

ELECTION

Two doctors of medicine were candidates for legislative office in the recent primary election. Dr. Benjamin Brunner of Wamego ran unopposed as the Democratic senatorial candidate from the Seventeenth District which consists of Nemaha and Pottawatomie counties, and Dr. J. B. Carter of Wilson defeated Mr. Emmett George of Osborne for the Republican Senatorial candidacy for the Thirty-second District, consisting of Ellsworth, Lincoln, Osborne and Russell counties.

Three chiropractors and four osteopaths were also candidates in the primaries. J. F. Romary, a chiropractor of Burlington, and C. B. Pettit, a chiropractor of Lyons, ran unopposed as the Democratic candidates for the House of Representatives from Coffey and Rice counties respectively. Romary's opponent in the general election will be Mr. Otis Douglas of Burlington, Pettit's opponent will be Mr. Homer E. Ira of Chase. P. N. Hansen, a chiropractor of Peabody, was defeated by Mr. J. V. Friesen of Hillsboro who will be the Republican candidate for Representative from Marion county. J. B. Donley, an osteopath of Kingman and K. A. Bush, an osteopath of Harper, were unopposed as Democratic candidates for the House of Representatives from Kingman and Harper counties. Their opponents in the general election will be Mr. Paul Wunsch of Kingman and Mr. Harry H. Halbower of Anthony. D. B. Fordyce, an osteopath of Oswego, was unopposed as the Republican candidate for Representative of Labette county. His opponent in the general election will be Mr. Carl Francisco of Hackberry Township. I. E. Nickel, an osteopath of Smith Center, was defeated by Francis L. Daniels of Smith Center, who will be the Smith county Republican nominee for the general election. His opponent will be Mr. G. W. Caldwell of Harlan.

OSLER PICTURE AVAILABLE

"Osler at Old Blockley" a painting in oil by Dean Cornwell, was unveiled at the dedication of the Osler Memorial Building on the ground of the Philadelphia General Hospital this past June and was later exhibited at the American Medical Association convention in New York.



The painting depicts one of Osler's outstanding contributions to medicine, namely, bringing medical students to the bedside of the patient for clinical study. In the painting Osler is shown at the side of an elderly patient on the hospital grounds. Surrounding Osler and the patient are interns who have stopped with him as they were on their way to the autopsy house to observe one of his famous post mortems. This autopsy house, now the only Osler Memorial Building in the United States, is shown in the background. This memorial was made possible by a grant from John Wyeth & Brother.

"Osler at Old Blockley" is the second painting in the series "Pioneers of American Medicine" sponsored by John Wyeth & Brother as part of a project to highlight the contributions of Americans to the advancement of medicine. "Beaumont and St. Martin" was the first painting in the series.

Colored reproductions of "Osler at Old Blockley", suitable for framing may be obtained free by addressing requests to either the Journal of the Kansas Medical Society or John Wyeth & Brother, 1600 Arch Street, Philadelphia, Pennsylvania.

NATIONAL PHYSICIANS COMMITTEE

The National Physicians Committee for the Extension of Medical Services announced in a report issued on July 5 that it has received contributions from 8,000 physicians, 209 county medical societies, sixty-three clinics, thirty-four hospitals and 111 lay individuals and groups. Approximately ninety per cent of the expenses of the organization to date has been devoted to the preparation of letters and pamphlets, to postage and to advertising of the type which appeared recently in two issues of the Saturday Evening Post.

Each county medical society in the United States has received a copy of the above report and a description of a new activity, wherein 2000 physicians will be asked to become foundation contributors at \$10 each. The foundation fund is intended to establish a surplus through which stability may be provided for the activities of the committee.

Books That Light the Way to SUCCESSFUL DIAGNOSIS and Treatment of SKIN and HAIR AFFECTIONS

"DISEASES of the SKIN"

The authors of this volume believe that the time has come to tie the descriptions and concepts of disorders of the skin with general medicine and biology. Therefore, the 10th Edition of "Diseases of the Skin" emphasizes the viewpoint that skin lesions are frequently the symptoms of internal diseases, thus opening a new vista in medicine. Another outstanding feature of this edition is its illustrative material—1453 photographs to aid you in the diagnosis of puzzling cases, and the author's interpretations of these pictures to further assist you. The book has been rearranged, new material, illustrations, and bibliographic entries have been added, making the volume a comprehensive "atlas" of skin diseases.

By
R. L. SUTTON and
R. L. SUTTON, Jr.

1549 Pages

1452 Illustrations

21 Color Plates

PRICE
\$15.00

"Diseases of the Skin" covers: Anatomy; Embryology; Physiology; General Etiology; General Symptomatology and Pathology; General Diagnosis; Treatment; Classification: Class 1—Inflammations, Class 2—Purpuras, Class 3—Metabolic Dermatoses, Class 4—Atrophies, Class 5—Neuroses, Class 6—Anomalies of Pigmentation, Class 7—Malformations, Class 8—New Growths, Class 9—Diseases Due to Viruses, Class 10—Diseases Due to Bacteria, Class 11—Diseases Due to Higher Fungi, Class 12—Diseases Due to Animals, Class 13—Diseases of the Mucous Membrane; Index.

"DISEASES of the HAIR"

This new book supplies information which has not been easily available before, information on the diagnosis and treatment of hair conditions which will allow you to give your patients prompt and complete relief. The subject is discussed with reference to etiology, pathology, and symptomatology as well as diagnosis and treatment, and minute instructional details are given for treatment. In addition, special emphasis has been placed on the differential diagnosis of the various diseases and their possible relationship to general health. "Diagnosis and Treatment of Diseases of the Hair" is a book which every practitioner of medicine should own.

By
LEE McCARTHY

653 Pages

291 Illustrations

7 Color Plates

PRICE
\$9.50

Contents: I. Anatomy, Physiology, and Hygiene of the Hair and Scalp, with a Classification of the Various Diseases; II. Disturbances in the Pigmentation of the Hair; III. The Atrophies of the Hair; IV. The Hypertrophies; V. Inflammatory Diseases of the Hair Follicles; VI. Other Disease of the Scalp Which Influence the Development and Structure of the Hair; VII. The Relation of the Endocrine Glands to the Distribution and Growth of the Hair; VIII. Oddities of the Scalp.

THE C. V. MOSBY COMPANY
3525 Pine Blvd., St. Louis, Mo.

KMJ 8-40

Gentlemen: Send me

() "Diseases of the Skin" priced at \$15.00
() "Diseases of the Hair" priced at \$ 9.50

Dr.

Address.....

MEMBERS

Dr. Lewis G. Allen and Dr. Fred E. Angle of Kansas City were guest speakers at the Sixth Midsummer Radiological Conference which was held in Denver, Colorado, on August 8-10. Dr. Allen's subjects were: "The value of the Scout Film of the Abdomen" and "Medical Aspects of Ultra Short Wave X-Rays". Dr. Angle's subjects were: "Clinical Features of Brucellosis" and "Radiation Therapy in Surgical Mumps".

Dr. H. H. Asher of Wichita spoke on "Venereal Disease" at a state meeting of the Public Health Nursing Association held in Wichita on June 5 and 6.

Dr. W. W. Cooper, formerly of Reading, is now with the Veterans Administration Facility in Minneapolis, Minnesota.

Dr. A. E. Hertzler of Halstead will be a guest speaker at the Seventieth Annual Session of the Colorado State Medical Society in Glenwood Springs, Colorado on September 12-14. Dr. Hertzler will speak on "Wound Healing".

Dr. James E. Hill who has recently completed post-graduate work in Chicago is now with the Hatcher Clinic in Wellington. Dr. Hill was born in Mitchell county and attended Wichita High school and the University of Kansas School of Medicine.

Dr. J. G. Jantz, formerly of Newton, is now located in Manhattan where he is associated with Dr. K. F. Bascom and Dr. Willard Schwartz.

Dr. C. V. Minnick, formerly of Wakefield, has established an office in Junction City.

Dr. H. F. O'Donnell of Wichita attended the American Urological Association Convention, on June 24-27, in Buffalo, New York.

Dr. Walton H. Rea of Arkansas City has announced he will retire from active practice and that he will move to Topeka.

Dr. M. C. Sexton, formerly of St. Paul and later of Seattle, Washington, has moved to Lebanon where he has established an office.

Dr. Charles M. Starr of Larned left on July 9 for Los Angeles where he will take a post graduate course in surgery.

Dr. Samuel T. Thierstein of Lindsborg is taking a post graduate course in obstetrics at the University of Chicago, this summer. Dr. Lilbourn Martin who recently completed a residency at Bridgeport, Connecticut, is assisting during Dr. Thierstein's absence.

Dr. J. V. Van Cleve of Wichita spoke on "Syphilis" and Dr. George Gsell of Wichita spoke on "Evaluation of Ocular Discomfort" before a meeting of the Alfalfa County Medical Society on May 25 at Cherokee, Oklahoma.

COUNTY SOCIETIES

The Ford County Medical Society held a meeting June 14 in Dodge City. Dr. C. T. Hinshaw of Wichita conducted a round table discussion on pediatrics and Dr. C. C. Tucker of Wichita spoke on "Infection of the Anus and Rectum."

The McPherson County Medical Society held a meeting in McPherson on July 10. Dr. L. Gilbert Little of Wichita spoke on "Psychiatry, What It Is And Whence It Came". Wives of members and members of the county nurses' association were guests.

The Marshall County Medical Society held a meeting in Marysville on June 20. Dr. T. T. Myers of Marysville was elected secretary of the society to fill the vacancy caused by the departure of Dr. Luin Thacher for California.

The Nemaha County Medical Society held a meeting in Sabetha on July 16. The August meeting will be held in Centralia.

The Republic County Medical Society held a meeting in Belleville on June 18. Indigent medical care was discussed. The next meeting of the society will be held in September.

DEATH NOTICES

Dr. Charles E. Brown, 62 years of age, died June 17 in the Cushing Memorial Hospital after a short illness. Dr. Brown was born in Highland, Kansas, December 15, 1877. He later attended the University of Kansas and was graduated from the University of Minnesota School of Medicine, Minneapolis, in 1904. He was a World War veteran and at his death was prison physician at the Kansas State Prison in Lansing. He was a member of the Leavenworth County Medical Society.

Dr. John Clark Brown, 81 years of age, died June 25 at his home in Wichita. Dr. Brown was graduated from the National University Medical School, now George Washington University, in 1900. He had practiced in Wichita since 1902. He was a member of the Sedgwick County Medical Society.

Dr. Albert C. Johnson, 75 years of age, died April 2 of pneumonia and coronary thrombosis at Chanute. Dr. Johnson was graduated from Keokuk Medical College, Keokuk, Iowa in 1896. He was a member of the Cherokee County Medical Society.

Dr. Francis E. Wynne, 32 years of age, of Baxter Springs, died July 30 of poliomyelitis. Dr. Wynne was graduated from the University of Kansas School of Medicine in 1933. He was president of the Cherokee County Medical Society at the time of his death.

ZEMMER

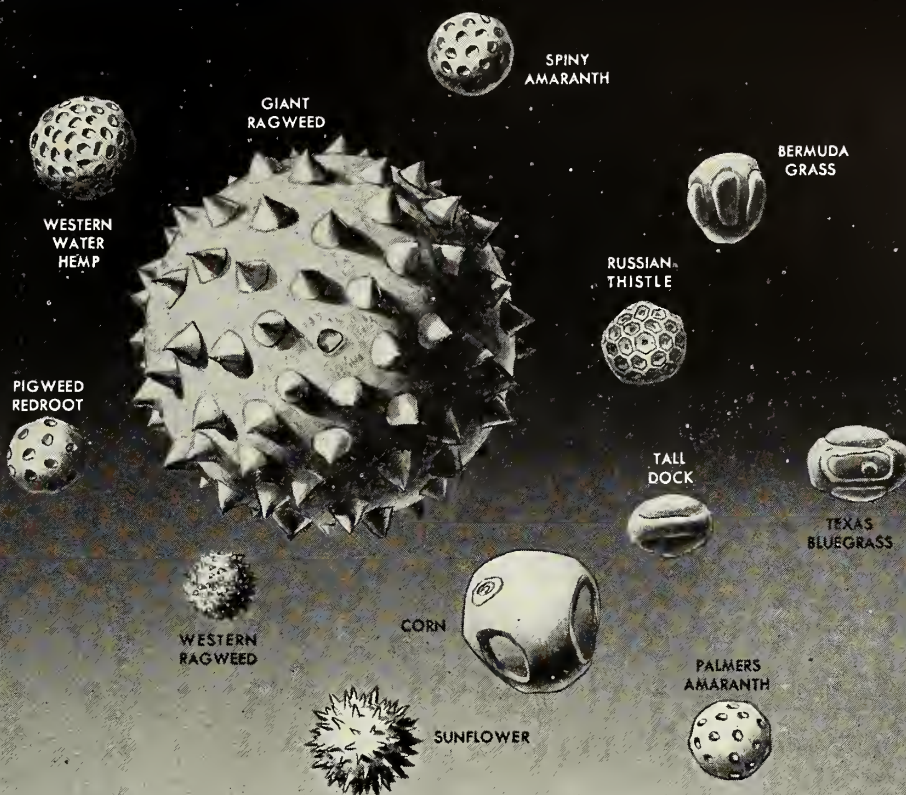
products are dependable

PRESCRIBE OR DISPENSE ZEMMER

Pharmaceuticals . . . Tablets, Lozenges, Ampoules, Capsules, Ointment, etc. Guaranteed reliable potency. Our products are laboratory controlled. Write for general price list.

Chemists to the Medical Profession

THE ZEMMER CO. KA 8-40
Oakland Station Pittsburgh, Pa.



Weeks of acute misery, or weeks of comparative comfort? To the hay fever sufferer 'Benzedrine Inhaler' often makes just that difference.

Illustrative motif based on Balyeat's Allergic Diseases: Their Diagnosis and Treatment, 4th edition. Copyright, F. A. Davis Company, Publishers.



BENZEDRINE INHALER

A VOLATILE VASOCONSTRICTOR



Each tube is packed with amphetamine, S.K.F., 325 mg.; oil of lavender, 97 mg.; menthol, 32 mg. 'Benzedrine' is S.K.F.'s trademark, Reg. U. S. Pat. Off.

SMITH, KLINE & FRENCH LABORATORIES, PHILADELPHIA, PA.



EST. 1841

ANNOUNCEMENTS

American Board of Obstetrics and Gynecology—The annual written examination and review of case histories (Part I) for Group B candidates will be held in various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p.m. Candidates who successfully complete the Part I examinations proceed automatically to the Part II examinations held later in the year.

The following action regarding case records to be submitted by candidates taking the Group B, Part I, examination was passed by the Board at its annual meeting in Atlantic City, N. J., on June 6, 1940: "Case records submitted by candidates must be of patients treated within four years prior to the date of the candidate's application. The number of cases taken from one's residency service should not be more than half (25) of the total number of fifty (50) cases required." Applications for admission to Group B, Part I, examinations must be on file in the Secretary's Office not later than October 5, 1940. The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting at Cleveland, Ohio, immediately prior to the June 1941 meeting of the American Medical Association.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

Training Requirements—In response to numerous inquiries regarding special training requirements, the Board desires again to announce that there are three methods of meeting these requirements for admission to the Board

examinations. First, by the residency system; second, by the partial residency and partial assistantship method; and third, entirely by the assistantship or "preceptorship method." Details of the residency requirements are given in the Board booklet. The Board will accept in lieu of the formal residency service the training acquired by a candidate serving on an assistant or dispensary staff of an obstetrical and gynecological division of a recognized Hospital, under the direction of a recognized obstetrician-gynecologist (preferably a Diplomate). The time required for this type of training must be longer than with the formal, more intensive residency type of training, and the allowance of time depends upon the duties and responsibility given the candidate. Applicants lacking all formal special training should have a minimum of five years of hospital clinic, or assistant staff appointments in the specialty, under approved direction. Teaching appointments without accompanying hospital staff or clinical appointments will not satisfy the Board requirements. A special form amplifying the original application must be filled out to cover the details of such assistantship, or preceptorship type, of training. The Board approves for special training, work done in institutions approved jointly by the Board and by the Council on Medical Education and Hospitals of the A. M. A.

The American Academy of Ophthalmology and Otolaryngology will hold its forty-fifth annual convention in Cleveland, October 6 to 11, with headquarters at the Hotel Cleveland. The Academy, an organization of more than 2,500 specialists in diseases of the eye, ear, nose and throat, carries on an active program of education for its

THE STOKES HOSPITAL

Established 1904

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Hed. Dir.

923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102

JOHNSON HOSPITAL

CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray

Cook County Graduate School of Medicine

(In affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue, starting every two weeks. General Courses One, Two, Three and Six Months; Clinical Courses; Special Courses.

MEDICINE—Two Weeks Intensive Course starting October 7th. Two Weeks Course in Gastro-Enterology starting October 21st. One Month Course in Electrocardiography and Heart Disease every month, except months of August and December.

FRACTURES & TRAUMATIC SURGERY—Ten Day Intensive Course starting September 23rd. Informal Course every week.

GYNECOLOGY—Two Weeks Intensive Course starting October 7th. Four Weeks Personal Course starting August 26th.

OBSTETRICS—Two Weeks Intensive Course starting October 21st. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks Intensive Course starting September 9th. Informal and Personal Courses every week.

OPHTHALMOLOGY—Two Weeks Intensive Course starting September 23rd. Informal Course every week.

ROENTGENOLOGY—Special Courses X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

TEACHING FACULTY—ATTENDING STAFF OF COOK COUNTY HOSPITAL.

Address Registrar, 427 South Honore Street,
Chicago, Illinois

THE DEFENSE OF KANSAS

The industrial might of America is swinging into action to furnish the machines and materials vital to the defense of our nation. The most tremendous peace-time buying and building program of our history is rolling onward, measuring time by hours rather than by weeks or months.

Kansas, in a spirit of patriotic devotion, has offered its resources for the program of nation defense.

There is a tendency, however, among defense officials to overlook many of the opportunities offered in Kansas. This tendency carried to its indicated end would drain Kansas of much of its industrial might and many of its men. It would unbalance our national economy and bring long-lasting damage to our state.

To counteract this tendency—to preserve and promote the balanced economy of Kansas and the nation—this commission is constantly on the job both in Kansas and in Washington. The cause of Kansas and the opportunities of Kansas are being called daily to the attention of defense officials. Such action, we feel, is to the best interests of America and a needed contribution to Kansas welfare.

THE KANSAS INDUSTRIAL DEVELOPMENT COMM.

STATE HOUSE — TOPEKA

members. In addition to scientific papers, an elaborate series of courses is presented at each convention to bring the members up to date in their chosen fields. More than 100 of these teaching lectures will be offered this year.

In the past year arrangements have been made to extend the teaching activities to young physicians just entering on specialization. Home study courses are being prepared for any of these young men who wish to take them and their work will be supervised by members of the academy interested in improving the caliber of specialists in practice. The Cleveland meeting will be noteworthy in several respects.

The Academy will honor Dr. Secord H. Large, Cleveland, who this year completes thirty years as comptroller of the organization. Dr. Large as the honor guest of the meeting will receive many special distinctions.

Immediately following the Academy meeting, there will be a Pan-American Congress of Ophthalmology, October 11 and 12, which eye specialists from all the Latin American countries are expected to attend. Dr. Frank Brawley, Chicago, is president of the Academy and Dr. Frank R. Spencer, Boulder, Colo., is president-elect. Vice presidents are Drs. Arthur W. Proetz, St. Louis; Joseph F. Duane, Peoria, Ill., and Charles T. Porter, Boston. Dr. William P. Wherry, 1500 Medical Arts Building, Omaha, is executive secretary.

The 19th annual scientific and clinical session of the American Congress of Physical Therapy will be held September 2 to 6th, inclusive, at Hotel Statler, Cleveland, Ohio. This year there will be a departure from the usual arrangements in that the mornings will be devoted to an instructional seminar with the scientific program presented afternoons and evenings. This enables physicians to economize on time by attending both the instruction course and the annual convention during the same week. The entire instruction schedule is elective in character. Registrants may pursue only the individual courses they desire. The complete course consists of twelve lectures from a diversified list of forty-eight. The scientific program itself consists of papers, demonstrations and motion pictures covering every branch of physical therapy. There will be a separate scientific program covering Eye, Ear, Nose and Throat subjects.

Write for schedule, fees, etc., to the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Ill.

The Twenty-fifth Annual Session of the American College of Physicians will be held in Boston, with general headquarters at the Statler Hotel, April 21-25, 1941. Dr. James D. Bruce of Ann Arbor, Mich., is President of the College and will have charge of the program of general scientific sessions. Dr. William B. Breed of Boston has been appointed General Chairman of the Session, and will be in charge of the program of clinics and demonstrations in the hospitals and medical schools and of the program of panel and round table discussions to be conducted at the headquarters.

NEW BOOKS RECEIVED

ANATOMICAL STUDIES FOR PHYSICIANS AND SURGEONS—Ninth Edition, Published by S. H. Camp & Company, Jackson, Michigan.

THE PATIENT'S DILEMMA, The Quest for Medical Security in America—Hugh Cabot, M.D. Published by Reynal & Hitchcock, Inc., 386 Fourth Avenue, New York. Price \$2.50.

THE 1939 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., and J. P. Greenhill, M.D. Published by the Year Book Publishers, 304 South Dearborn, Chicago, Illinois, 1940. Price \$2.50. Containing 736 pages, illustrated.

THE 1939 YEAR BOOK OF PEDIATRICS—Isaac A. Abt, M.D., and Arthur F. Abt, M.D. Price \$2.50. Published by the Year Book Publishers, 1940. Containing 520 pages, illustrated.

MANUAL OF THE DISEASES OF THE EYE, For Students and General Practitioners—By Charles H. May, M.D., Consulting Ophthalmologist to Bellevue, Mt. Sinai and French Hospitals, New York, Formerly Chief of Clinic and Instructor in Ophthalmology, Medical Depart-

Phone
3-3261

The OVERTON ELECTRIC CO., Inc.

522
Jackson

Specializing in all forms of
FLUORESCENT LIGHTING.



Buy the finest
HY - GRADE
LAMPS—Look
for the Red
Triangle.

AN ELECTRICAL SERVICE
THAT IS COMPLETE.

TOPEKA

S. D. THACHER, President

KANSAS

THE ARNOLD DRUG COMPANY

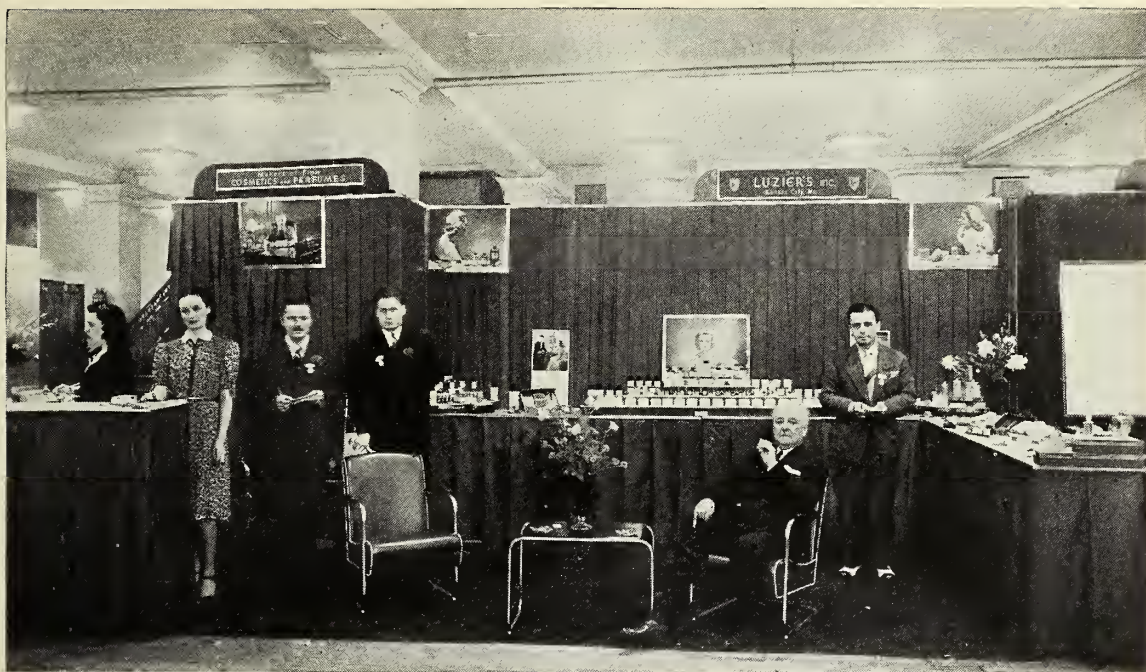
523 KANSAS AVENUE

TOPEKA, KANSAS

For 71 years we have serviced the Medical Profession. We pride ourselves with having the most complete stock of nationally advertised merchandise, featuring Eli Lilly Products exclusively. We sincerely appreciate the fine way that you have treated our store.

Thank You

GEORGE RALSTON



THE LUZIER EXHIBIT AT THE 1940 CONVENTION OF THE A. M. A., NEW YORK CITY, JUNE 10-14

We desire to merit your recommendation of our products, Doctor, and toward this end we shall be pleased to supply you with any information you may wish concerning our formulary, and, in specific cases, with raw materials for patch testing.

**LUZIER'S FINE COSMETICS AND PERFUMES
ARE DISTRIBUTED IN KANSAS BY:**

C. B. BURBRIDGE, *Divisional Distributor*

P. O. Box No. 1010
Lincoln, Nebraska

DISTRICT DISTRIBUTORS

EDWIN S. KIMMEL

P. O. Box No. 582
Salina, Kansas

SUB-DISTRIBUTORS

LAURA CUDDY

614 Fremont Street
Manhattan, Kansas

MYRA KIMMEL

P. O. Box 269
Concordia, Kansas

MARY I. GREENE

301 West Fifth Street
Junction City, Kansas

ELSIE HARING

10 East Tenth Street
Hutchinson, Kansas

MABLE SEARS

909 E. Elm Street
Salina, Kansas

ment of Columbia University, and Director of the Eye Service at Bellevue Hospital, New York. Sixteenth Edition, Revised, with the Assistance of Charles A. Perera, M.D., Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department of Columbia University, New York. Containing 515 pages, 387 illustrations, thirty-one plates and ninety-five colored figures. Published by William Wood and Company, Baltimore, 1939. Priced at \$4.00 per copy.

FRACTURES, DISLOCATIONS AND EPIPHYSEAL SEPARATIONS—Harry C. W. S. De Brun, M.D. Published by the Year Book Publishers, Chicago, Illinois, 1940. Contains 468 pages, 150 illustrations. Price \$3.00.

MEDICAL EDUCATION IN THE UNITED STATES, 1934-1939—Published by the Council of Medical Education and Hospitals of the American Medical Association, Chicago, Illinois.

FAITHS THAT HEALED—Ralph H. Major, M.D., Published by D. Appleton-Century Company Inc., New York, 1940. Price \$3.00. Dr. Major of Kansas City is also the author of the book "Disease and Destiny."

AUXILIARY

PRESIDENT'S MESSAGE

For many August is the vacation month of the year and my wish is that each of you, whether at home or away, may somehow find the vacation spirit and with it rest and relaxation.

Now since the political conventions are over, we should be able to relax, at least thru August. We were urged, however, at our National Auxiliary meeting in New York, to do some serious thinking about the political situation, determine the candidates who will use their influence to preserve the present system of medical service and work for them.

It seems strange that doctors should be questioned, but they can prove their accomplishments and we, as Auxiliary members, can let the facts be known.

Also it was stressed, time after time, that we commit the Eight Point Platform of the American Medical Asso-

ciation. Mrs. Holcombe read it to us at a very busy session.

Have you read "Doc's Wife" by Dr. Faye Lewis who was both a wife and a doctor? It was off the press in May. It takes you over such familiar ground that you forget at times you are not reviewing your own experiences.

It is so difficult to keep our lives normal in this stupendous age when current events tend to crowd out other reading and activities, but should we not find time for those things which rebuild and strengthen us and pursue the even tenor of our way?

Yours sincerely,

Mrs. T. D. Blasdel.

The following item, taken from the California Medical Auxiliary Courier, October, 1939, may be of interest to Program Chairmen throughout the state: "HOW DO YOU LIKE YOUR MEDICINE? or CAN YOU TAKE IT? (In Three Doses)—Are you one of the Auxiliaries that has given or contemplates giving that clever skit of the above title? Written by Mrs. Willard Newman of San Diego County Medical Auxiliary expressly for the December, 1938, meeting of that organization and most ably directed by Mrs. Fraser McPherson, also an Auxiliary member, it was received with such accord that the members who acted in it gave six performances before their "public" was satisfied. Then, upon the request of the State President, Mrs. Wright, a copy of it was sent to Mrs. Arthur Newcomb of the Los Angeles Auxiliary, then State Librarian.

Written in three short episodes, it compares the practice of medicine in the late nineteenth century with that of the present day with its medical fads, and then projects itself into the future, showing what it may be like when socialized medicine is in effect.

The first scene is laid in a doctor's office in the 1870's and shows the criticism he receives for his advanced treatment—things that are of common knowledge and practice today. The second scene is a table of bridge at the home of a present-day doctor's wife, and depicts clearly the following that many of the medical cults possess. In the last act, we are taken to the office of the socialized medicine of the future, and are shown what red tape and the handling of medical affairs by lay people will do to the public.

Those of you who know Mrs. Newman personally, do not need to be told that the lines are most clever and the whole thing is not only hilariously funny, but also there is a bite of the truth in it that puts over, in a pleasing fashion, an idea that we have been trying to take care of in a more serious manner. If you have been looking for a



Hotel Jayhawk

TOPEKA ~ KANSAS

Main Dining Rooms and Coffee Shop

Air Conditioned and Refrigerated

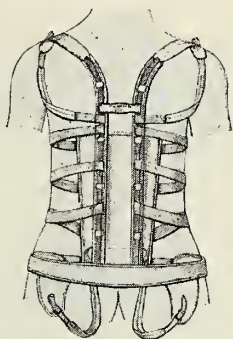
Many Private Dining Rooms Available for Special Parties

THE MOSBY HOTEL CO.

N. M. Mosby, Pres. & Gen. Mgr.

BACK BRACE

For correction of faulty posture, severe sacro-iliac strain, and convalescent treatment of fracture of spine.



P. W. HANICKE MFG. CO.

1013 McGee Street
KANSAS CITY, MO.

Tel. Victor 4750

It's RAY BAN Time

For your sport enthusiasts — order their corrections in RAY BAN. They'll be pleased.

QUINTON-DUFFENS
OPTICAL COMPANY

Your Local Independent Wholesaler

TOPEKA

HUTCHINSON

SALINA

SILVER PICRATE

Wyeth

HAS SHOWN A CONVINCING RECORD* OF
EFFECTIVENESS IN ACUTE ANTERIOR URETHRITIS

due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
Monilia albicans

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

play to do for your Auxiliary, try "How Do You Like Your Medicine?" You will find each "Dose" sugar coated! (Copies of the play may be obtained from Mrs. Wm. C. Boeck, 712 N. Maple Drive, Beverly Hills, California.

The address of Dr. Nathan B. Van Etten, President of the American Medical Association for 1940-41 before the Woman's Auxiliary to the A. M. A. in New York City in June of this year is so timely and so deserving of the earnest consideration of every Auxiliary member that parts of it are being quoted herewith: "The attacks upon it (the A. M. A.) by small groups of so-called welfare workers who are really only non-professionals who desire to hold public service jobs and salaries, have reacted in boosting the membership actively during the last four years. The attack by the Department of Justice in the interest of a government promotion in medical care also resulted in renewed support within the profession and a remarkable display of resentment among lawyers and dentists and pharmacists and clergymen. All of these professions see the dangers of governmental regimentation that may deny them democratic liberty to free speech. All of them see the tendency toward strangling the competitive spirit which has always stimulated American initiative. It is difficult to understand except for reasons of material advantage and a desire for dictatorial powers, why lay workers in the field of welfare, wish to embarrass the hands of the medical profession. Welfare workers are necessary adjutants of the doctor and should be working with the doctor and not against him."

"Perhaps the doctor has too long waited for the lay worker to show him local needs. Perhaps the doctor has been careless of his responsibilities toward community health programs. He must be stimulated to take a new attitude and direct these programs and direct the public health nurse and the welfare worker in all their activities. If he assumes this attitude locally he will find his true place in civic affairs. No one can be in a better position to promote his public interest than a cooperative wife. The doctor has always worked without fee for the indigent and probably always will, but this service has been disorganized. I seriously look to the Woman's Auxiliary of the American Medical Association to change this manner of the care of those who are really public dependents and spread this load over the community so that no doctor is exploited by so-called welfare organizations. * * *

Does your state need more hospitals in new locations? Does your state need more beds in existing hospitals? Does your state need more laboratories? Does your state need more ambulances? Does your state need and can it support more doctors? Does your state need more specialists? Does your state need more public health nurses? Does your state need more welfare workers? Does the health program in your state need financial help, through federal agencies, from the general tax pool? Have you read the Wagner Health Bill, S. 1620? Have you read the Mead Bill? Have you read the Pfeiffer Bill? Have you read the modified Wagner-George Bill? Have you studied the President's plan? Do you know the American Medical Association's platform by heart? And do you understand its implications? Do you know Surgeon General Parran's plan for a crusade against syphilis?"

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago
Phone Randolph 8855



The
W. E. ISLE CO.
PHONE VICTOR 2350
2ND FLOOR-1121 GRAND
KANSAS CITY, MISSOURI

COMPLETE
APPLIANCE
SERVICE

CAPABLE FITTERS

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

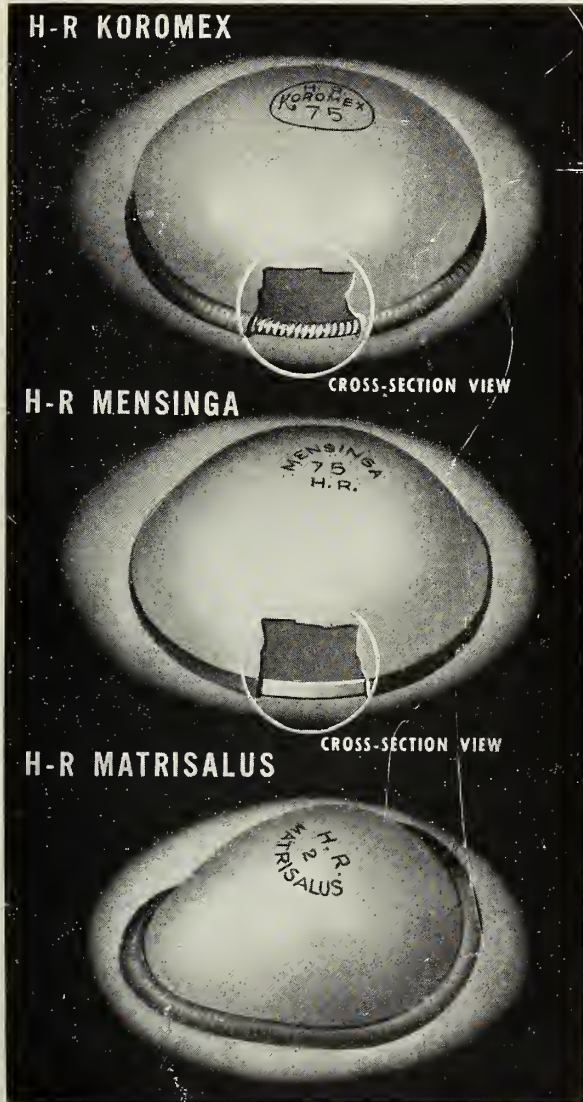
529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the
A.M.A.

Diaphragms for EVERY Condition



HOLLAND-RANTOS offers a most complete line of diaphragms. We invite inquiries concerning specific conditions.

• • •

The H-R Koromex diaphragm (coil spring type) is available in sizes from No. 50 to No. 105 mm., and is indicated for use in all normal anatomies.

The H-R Mensinga diaphragm (watch or flat spring) is available in sizes from No. 50 to No. 90 mm. including half sizes, and is indicated where there is a slight redundancy of the mucosa of the retro pubic space, or a slight relaxation of the anterior vaginal wall.

The H-R Matrisalus diaphragm is available in sizes—No. 1 to No. 6 corresponding to 65, 70, 75, 80, 85 and 90 mm. This special shaped diaphragm is indicated in cases of cystocele or prolapse where, owing to relaxed vaginal walls, the ordinary diaphragm cannot be retained in position.

**Send for copy of "Physician's Diaphragm Chart
and Fitting Technique"**

HOLLAND-RANTOS CO., Inc.

551 FIFTH AVE. - NEW YORK
308 W. WASHINGTON ST. - CHICAGO
520 WEST 7TH ST. - LOS ANGELES

MESSAGE FROM ORGANIZATION CHAIRMAN

As Organization Chairman, I have been thinking much about all the potential members of our medical Auxiliary, and the good we can do for the lay people of our state.

First let me suggest that each one of us make herself a committee of one to enlist every eligible doctor's wife as a member of the Woman's Auxiliary to the Kansas Medical Society. We hope to reach, through the Organization Committee every single one some time during the year. It will add to the interest if others are working too. So much could be accomplished if we were all at work instead of just a few. There are some 1500 doctors belonging to the Kansas State Medical Society, and we number only about 375. It is easily deservable that the field is rich in which to work.

Perhaps it is not possible to have an auxiliary in some of the scattered areas, but we can have individual members and they can attend neighboring auxiliaries. It is good to know other doctor's wives. We have a kindred spirit and something in common.

So my message to you is seek those who have not enrolled with us and get them into the fold.

(Mrs. L. B.) Ella V. Spake,
Organization Chairman.

NOTE

We regret there has been some confusion about the Hand Books. When Mrs. Holcombe took office she asked

Mrs. Coffey to send the supplies on hand to Mrs. S. H. Harrington, 3722 Cragmont Street, Dallas, Texas. She did so promptly, but Mrs. Harrington was on her vacation until August 1st, and the books have been in the freight office in Dallas. Our order for the Board members has been placed several weeks so we hope they will reach you soon. Several who have them are finding them very helpful.

FOR SALE—Ten bed, fully equipped hospital in town of 1700 population. Write Mrs. Florence Funk, Smith Center, Kansas.

FOR SALE—Medical Library, 165 volumes, Tice, Sajous, Dictionaries, Hand-books, etc. Also some laboratory equipment. Write, C. F. Deaver, Sabetha, Kansas.

FOR SALE—Complete office equipment for Eye, Ear, Nose and Throat of the late J. Frank McNaught, M.D., Girard, Kansas. Description and prices on request. Mrs. Ethel McNaught, Girard, Kansas.

WANTED—Resident doctor, village and rural practice at Alden in Central Kansas; partially equipped office of late Dr. David T. Muir for rent; good roads; pleasant community; large territory; expenses small; hospitals eight and fourteen miles. Write or call Mrs. D. T. Muir, Alden, Kansas.

**A NEW AID TO
OPHTHALMIC SURGERY**

**THE HAGUE
CATARACT LAMP**

The Hague Lamp efficiently and safely fluoresces the lens of the eye and corneal lesions stained with fluorescein. The supply of fluorescing ultra-violet is greater than in previous lamps and the illumination is uniform and stable. The Hague lamp is light in weight, compact, easy both to hold and manipulate. Extensive biological experiments show the abiotic rays are well within limits of safety. The Hague Cataract Lamp is another instrument by American, to expedite your ophthalmic practice.

BY AMERICAN OPTICAL COMPANY

AO

THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

SEPTEMBER, 1940

Number 9

THE ROLE OF ENDOCRINES IN PEDIATRIC PRACTICE

By

Julian D. Boyd, M.D.**

Iowa City, Iowa

Training in our medical schools is based largely on the study of disease. When the young physician first enters medical practice his mind is filled with pictures of manifest illness accompanied by marked pathological changes. When patients present themselves to him for treatment, he is disconcerted if he fails to find such evidences of disease. Only with experience do we come to recognize that a large part of medical practice is made up of minor disturbances of function which are explainable more on the basis of the manner of life the patient is living than on organic disease. Many of the patient's complaints are difficult to ascribe to the stereotyped medical syndromes, even though they obviously are matters for concern. The recent exploitation of vitamins, allergy and endocrines has opened up new avenues for explaining our patient's symptoms. Pharmaceutical houses are selling vast quantities of products which were unheard of a decade ago. Are these medications serving a useful place in treatment, other than the psychic effect their use may offer? Surely some of these new products are indispensable, and without their use certain of our patients could not survive and others would suffer needlessly. Occasionally the physician encounters unquestioned instances of endocrine dyscrasia, and through suitable therapy he may prolong the life of such a patient, or even restore him to a state of health and of useful activity. Such examples of endocrine disease are more common in the adult patient than in the child. This presentation is designed to indicate in some measure what forms of such disturbance may be expected in the child, what manifestations may be mistaken for endocrine dyscrasia, and how these and related conditions can be treated success-

fully. Generally speaking the role of endocrines in children's disease is less than the use of endocrine therapy would indicate.

At the outset we should recognize the fact that knowledge now available concerning the function of the internal secretions represents only a fringe of the fabric. Most of what we know has been learned through animal experimentation under conditions which differ from disease as it is encountered in humans. We cannot assume that such knowledge can be carried over into medical practice. When adenomas of endocrine glands are present, they may give rise to unmistakable signs of hyperfunction. When these adenomas undergo degenerative changes, or when for any other reason the gland substance is destroyed or reduced in amount, evidences of hypofunction will arise. The child may be born with some form of endocrine deficiency; this usually is not apparent at the time of birth, but becomes manifest at a time when the body's demands exceed the gland's capacity. Under the conditions mentioned, the patient's symptoms and clinical course usually will leave no reasonable doubt as to the diagnosis. Unfortunately the term endocrine disorder has come to include in the minds of some practitioners a wide range of minor disturbances or peculiarities of physique in which endocrine causation can be established only through a process of rationalization. In such patients endocrine products do little if any good, and frequently do harm.

Preliminary to further discussion, attention should be drawn to certain characteristics of childhood, which must be kept uppermost in mind in all problems of diagnosis and therapy. Childhood by definition is the period of growth and of development. It is not a period of stasis. Standards of normality of the child are progressive, and are based on the child's attainment in terms of his own past record as well as through comparison with other children. The characteristics of the child's physique are determined by his age, his genetic background, and the degree in which his environment meets his needs. It is important that the physician keep records of height, weight and general characteristics of the child as a part of his medical record, in addition to

* Presented at the 81st Annual Session of The Kansas State Medical Society, Wichita, May 15, 1940.

** From the Department of Pediatrics, College of Medicine, State University of Iowa.

citations of pathological findings. It also is important that the physician evaluate these physical characteristics in terms of the child's past and of the average standards for his age. When there is a discrepancy which seems unfavorable for the child, the physician should attempt to find an explanation for the situation. Occasionally the status will be due to endocrine anomaly. More often it will be explainable on the basis of the child's individual body pattern. Most frequently it can offer the physician evidence that the child's manner of living is not conducive to his best state of health and of development.

Minor evidences of retardation of growth are frequently observed during the careful examination, and occasionally the physician will encounter definite dwarfing. Granting that often the minor variations from standard physique represent the child's inherent pattern of physique, how often does smallness indicate endocrine anomaly and call for corresponding therapy? Studies on animals have shown that growth of the immature animal can be stimulated through administration of the growth promoting fraction of the anterior pituitary. Frequently such therapy has been employed with children, but generally speaking the results have been disappointing. Possibly this is explained, in part by the fact that usually the therapy is delayed until the child is approaching puberty, when capacity for growth may have been almost exhausted. Moreover, most instances of delayed growth are due to currently operative environmental factors rather than to endocrine imbalance. Without proper attention to the causative agents, little can be attained through any therapy. Such causative agents frequently comprise a combination of poor nutrition, persistent low grade infection, chronic fatigue, and occasionally impairment of function of some vital organ. It is our practice in dealing with children who are not growing properly to make an appraisal of the child's customary diet, both as to quantity and quality, to determine its predictable adequacy for normal development. Information is obtained as to the nature and degree of his activities, with a view of ruling out chronic exhaustion. Evidences of persistent infection are looked for, especially that involving the upper respiratory tract. Then tests are made to establish the normal functioning of the digestive tract, intermediary metabolism and renal excretion. The child is placed on a regimen which should promote growth in a normal child, suitable therapy is instituted for any infection or organic disease discovered, and the patient is observed under such a regimen for a period of several months to establish its efficacy. Such a plan usually is effective without the use of endocrine preparations. The following individual growth records illustrate this:

Child A entered the hospital at the age of three and one-half years, weighing only sixteen pounds and measuring only thirty-two inches. He had a history indicating chronic intestinal indigestion extending from the age of a few months. When placed on a diet low in fat and starch, high in skimmed milk, fruit juices, cod liver oil, egg and dextrose, he began to gain. With improvement the diet was liberalized with avoidance of excess fat and of complex carbohydrates. He gained rapidly, and in the course of the next three years he had reached the average height for his age and utilized well his modified diet.

Child B came to the hospital because of progressive bony deformities and dwarfism. She was found to have intractable rickets which did not respond well to vitamin D therapy until the total daily dosage was very large. Once the rickets came under control she began to grow and continued to do so at the normal rate, even though she did not make up for the initial loss. At present she continues at the lower level of normality for a child of her age.

Children C and D were twin sisters with diabetes mellitus. Child C developed the disease at the age of three, her sister at the age of nine. Each was markedly undersized at the time of our first observation. Once the children received and utilized an adequate diet, normal growth was resumed; in fact the rate was more rapid than seen in the average child. As a result they now are essentially normal in physique.

Child E was admitted to the hospital with complaints of irritability, food refusal, nausea and vomiting, and failure to grow. Examination indicated that she had a congenital anomaly of the kidneys associated with marked renal insufficiency. In spite of every available therapeutic measure she did not improve, and died at about the age of seven years. She grew but slightly following her first period of observation at the age of two years. Here the underlying cause of the failure to grow was the renal insufficiency; since this could not be corrected through therapy, no measure could lead toward growth stimulation.

Each of the children cited presented marked retardation of growth. In every instance, underlying organic disease was at fault. If these children had been treated with endocrine therapy at the outset, the causative conditions would not have been appreciated and progression of disease would have resulted. If endocrine products had been used as a phase of the treatment employed, we might wrongly have attributed the stimulation of growth to those agents rather than recognizing that the children grew satisfactory when their general health received the attention it deserved. Whereas we do not deprecate the use of the pituitary growth promoting factor or of thyroid extract when clinical evidence indicates that the child is deficient in these regards, we do not feel that such use should supercede other more effective and urgent measures.

Delay in sexual maturity should be matter of concern, if there is evidence that maturation is delayed more than is consistent with normal limits. There is a trend to use the sex hormone of the anterior pituitary in such patients without prelimi-

nary measures to determine the cause of the delay in development. Maturation may be delayed by any serious disease which interferes with normal metabolism. Dwarfism and infantilism are not uncommon sequels of inadequately treated diabetes mellitus. Proper regulation of the disease will lead to some measure of renewed growth and to maturation if the individual still is in the age when such events are possible. Moreover, suitable management of the disease is desirable for its own sake. It is unwise to use pituitary or other growth-promoting products as adjuncts to treatment of these individuals until the effect of attention to the general level of health and nutrition has been established through prolonged and controlled observation.

Obesity is another condition which frequently is treated with endocrine products without having established the presence of endocrine inadequacy and without ruling out environmental causes for the condition. For some reason, the medical profession has come to associate the diagnosis of obesity with that of hypothyroidism or of Froelich's syndrome. In a recent survey of adult obese patients in our department of internal medicine, only one out of a series of 400 patients was found to have undisputed evidences of hypothyroidism; and in a series of forty adult patients who came to the hospital because of thyroid deficiency, only five could be classified as obese. Usually the children who come to us because of obesity have received endocrine therapy, typically without benefit. Without exception we have found that these children were accustomed to eating more food than required for their energy needs. In no such patient have we used thyroid or other endocrine therapy for treatment of the obesity, and in all patients who would cooperate in limitation of diet to that prescribed, the desired reduction in weight has been observed. It seems apparent that through their heritage certain children are inclined to a stocky type of physique and that they tend to become overweight more readily than those of the small boned configuration. Very possibly this distinction arises from a difference in the endocrine balance which each has inherited at the time of shuffling of the chromosomes. Even in these persons, however, obesity is the sequel of overingestion, and it can be corrected or prevented through reduction of food intake to a suitable level. To bring about reduction of weight in the obese child this level must be considerably below the energy requirement, so that the organism will be forced to make up the deficit through combustion of the fat reserve. Needless to say, it is important that the diet be designed so that it is qualitatively and quantitatively complete in all regards other than the energy content. The latter may approximate nine hundred calories

under average circumstances. The use of such a diet together with wise prescription and supervision of exercise comprises the only regimen necessary for weight reduction in the obese child. The use of thyroid extract in addition not only is unnecessary, but may be dangerous. The thyroid extract serves to increase the rate of combustion of food and stimulate metabolic processes; often it stimulates the appetite as well. Estimations of the basal metabolic rate in children are difficult to interpret at all times, and this is true especially in the obese child. Recent observations have been reported to indicate that such a child may have a metabolic rate which appears to indicate hypothyroidism, yet when the rate is recalculated according to the child's creatinine excretion or when it is measured in some other manner, it is found to be higher rather than lower than normal.

Medical practices and beliefs have changed markedly during the past century, more especially since the dawn of the era of experimental observation. Some of the earlier ideas survive, however, even though they have been redressed to fit the current fashion. More and more, doubt is being directed toward one of these concepts, namely, the ability of the thymus gland to cause undesirable symptoms or death. Some texts still give the impression that the enlarged thymus is frequently a cause of stridulous breathing or of respiratory obstruction. Many surgeons still feel it necessary to rule out enlargement of the thymus prior to operation, so as to be sure that the child is not a candidate for so-called thymic death on the operating table. These ideas are based on certain misconceptions. The first of these is due to misinterpretation of the size of the normal thymus. Competent observers have established that in children with generalized disease the thymus undergoes involution so that within a few days it may be markedly diminished in size. Statistical data used by pathologists in estimating the relative size of the gland at the post mortem examination are based on glands which have undergone such involution. If the pathologist confines his normal data to the size of thymuses which are observed in the bodies of children who have died suddenly from external trauma, he will find that these new standards are as high as the values he previously has considered as abnormal. Interpretations of x-ray photographs of the chest are similarly misleading. The thymus is soft in consistency, and it adapts its shape to the space it must occupy. The apparent size of the thymus varies markedly with the two phases of respiration; if the picture is obtained during inspiration the gland may appear to be enlarged. Some observers have accepted fluoroscopic evidence of collapse of the trachea of young infants during ex-

piration as evidence that pressure from the thymus was distorting its lumen. This finding is normal in a high percentage of infants during the first six months of life, and is merely an indication of the pliability of the cartilaginous rings at that age of life. Moreover, so-called thymic breathing has been described in some infants offering no demonstrable evidence of thymic enlargement, whereas other infants with shadows interpreted as abnormally large have remained free from symptoms at all times. Sudden death in infants has been ascribed to a hypothetical state termed status thymolymphaticus. This diagnosis has not been based on experimental evidence establishing the existence of such a condition, or on pathologic evidence establishing that the thymus was involved in the cause of death. Instead this diagnosis has been used when the clinician or the pathologist was at a loss to suggest a more likely cause. It would be as justifiable to ascribe death in diabetic acidosis to disturbance of the thymus; in that condition the appearance of the tissues after death does not establish a cause of death. In our own experience we have found that infants who died unexpectedly may have concealed mastoiditis which becomes apparent only when the mastoid cells are examined at time of the autopsy. Such examination usually is not made in the routine post mortem examination, and the frequency with which hidden infection is overlooked cannot be estimated. Decidedly the evidence for the occurrence of thymic disorders is not convincing.

Evidence of deficiency of certain endocrines is seen occasionally during childhood. Most important of these are hypothyroidism and hypoinsulinism. Disturbances of the pituitary function are seen occasionally, but the picture often is obscure. The non-specificity of dwarfing has been discussed. Occasionally diabetes insipidus is seen in childhood, apparently dependent on hyposecretion of the anti-diuretic principle of the posterior pituitary lobe. This responds nicely to pituitary therapy, not only to hypodermic injection, but equally well to the nasal insufflation of the powdered whole gland.

Congenital hypothyroidism is a condition important to the medical practitioner. It can exert severe effects on the infant or child, leading to retardation of development of mind and body. With suitable treatment the child may develop within his full propensities. However, if treatment is delayed, inadequate or irregular in administration, permanent damage cannot be avoided. As soon as the diagnosis has been made and established, the physician should place the infant on a dosage of thyroid extract as large as it can tolerate without evidences of toxicity, and use every means at his disposal to have this medication continued under medical ob-

servation throughout the life of the patient. Since the evidences of hypothyroidism usually are not manifest at the time of birth, the physician may not have an opportunity to suspect the presence of hypothyroidism until the child's slowness in development and his abnormal appearance makes his abnormality apparent even to his parents. If the mother also has hypothyroidism, the infant may show signs of cretinism at the time of birth. Otherwise they may not become apparent until the fourth or even the sixth month. The degree of deficiency may vary from severe unmistakable cretinism to a borderline state in which the diagnosis can be established only through therapeutic trial. The true cretin tends to maintain its infantile configuration, with limbs which are short in comparison with the length of the trunk. Dentition is delayed. The infant is slow in his physical achievements. There is a tendency toward constipation and anemia. The dryness of the skin and coarseness of the hair may be less prominent than the usual textbook picture would imply. The infant is lethargic, his cry is throaty and coarse, his disposition is irritable. From week to week his progress is slower than one would expect. In the cretin who has passed the period of infancy without thyroid therapy, these abnormalities tend to become more conspicuous. Moreover, x-rays of the wrist will reveal significant delay in the appearance and development of the carpal centers.

When the physician has good grounds to suspect hypothyroidism in a child, he is justified in determining the effect of thyroid medication. Generally speaking, tolerance for significant amounts of thyroid extract may be accepted as evidence of need for the drug. The initial dose should be small—possibly one-quarter grain, three times a day, increasing it moderately at intervals of alternate days until the child's maintenance requirement has been attained or signs of toxicity have developed. With elevation of pulse rate, flushing, marked perspiration or diarrhea, the dosage should be reduced. The child with normal thyroid function will not be able to tolerate significant amounts of potent thyroid extract for any long period. Once the maintenance, subtoxic dose has been established, its administration should be continued each day without interruption throughout the lifetime of the individual. The safety and adequacy of dosage should be reviewed frequently. The physician should feel the responsibility for taking the initiative in maintaining treatment. We have seen some pitiable instances of children who were started on suitable therapy at a sufficiently early age, but whose parents had allowed it to lapse. As a result the children had relapsed into a state of idiocy for which no noteworthy improvement could be hoped.

Occasionally the physician is tempted to try thyroid medication for the child who is physically and mentally retarded because of mongolian imbecility. Such therapy is without value, and serves only to make the child irritable and unhappy. The mongol is not amenable to endocrine therapy of any type, and it is not kind to build up groundless hopes in the mind of his parents.

Goiter of adolescence is quite common, especially in areas of iodine deficiency. Its occurrence is practically eliminated through the supervised intake of iodine in some form in the diet. The condition of itself seems to be quite innocuous, and it is unwise to treat it in any way other than through the administration of minute amounts of iodine. The taking of two grains of sodium iodide once every two weeks is recommended by some physicians. The use of iodized salt probably is adequate as a prophylactic measure, if the product used is one which retains its iodine content at the time the salt is used. Certain impurities in the salt may lead to the loss of the iodine. Whereas objection has been raised to the promiscuous use of iodine in the diet because of its possible harmful effect on thyroid adenoma, experience seems to indicate that such danger is remote in the population at large.

Hypoinsulinism leads to the development of diabetes mellitus. In the author's experience, this endocrine anomaly has been seen more frequently than any other of the typical endocrine syndromes. About a tenth of all cases of diabetes make themselves manifest during childhood or early adolescence. Diabetes in the young person cannot be considered as equivalent to the disease as it is seen in middle life, even though the basic etiology may be the same. Typically it is more severe, and because of the child's problems of growth and development, it may exert more profound effects on the physique of the patient. The young diabetic patient never attains as secure a degree of stability of management as that obtainable with careful treatment of the adult, and he reacts more unfavorably to inadequate management than does the older patient. On the other hand, the child with diabetes mellitus who receives the advantages of optimum care will grow and develop as well or even better than the average child who often lives under substandard conditions. Whereas diabetes is not curable, and has a tendency to progress in severity during certain of its phases, it is more predictably controllable than any other major chronic illness when proper measures can be taken. Such measures call for accuracy of insulin dosage from day to day, provisions for estimating accurately the patient's metabolic status, and the maintenance of sugar-free urine insofar as it is possible under skilled management. This standard of

therapy is more strict than that commonly employed. With the adult such a regimen may be considered unattainable or unnecessary. For the young patient we feel that it is essential. With anything less, the physician and the family are condoning an undesirable and unnecessary state of affairs, which predictably will work to the child's physical disadvantage. The child who receives plenty of food for his body's needs and whose blood sugar is kept fairly within normal bounds through supervised insulin administration may look forward to a life of continued health and activity, with avoidance of the degenerative tissue changes which characterize poorly controlled diabetes and with freedom from acidosis or coma.

The regimen which we have found most effective in the management of the diabetic child may be of interest. It is based first on the prescription of a diet which is designed to provide liberal amounts of protein, minerals and vitamins, with a caloric value sufficient for the requirements of growth and full activity. This diet is revised from time to time to keep pace with the child's subsequent development. From the outset, insulin is used in amounts sufficient to keep the blood sugar level within normal bounds or as close to this as circumstances permit. The child's course is controlled through testing for sugar each sample of urine voided and periodically through estimation of the blood sugar level. At the start of management, or following any complication of management, the patient's insulin requirement is inconstant and must be adjusted from day to day. If conditions permit nicety of adjustment of dosage, with the patient under fully controlled conditions, the initial requirement for insulin is lessened markedly during a period of three to five weeks. Over a month usually elapses before the child reaches his maximum state of stability. If the preliminary program of management can be carried through to this point of maximum stability, the patient's subsequent course of care is simplified. Without this, he tends to remain unstable and have difficulty in the avoidance of glycosuria or insulin shock. We have not found protamine insulin adapted to the needs of the child patient. Its prolonged effect acts not as an advantage but to the contrary. Through its cumulative effect there is danger of severe intractable insulin shock if the patient is kept entirely sugar free. If glycosuria is countenanced as a means of combating insulin shock, the cost in terms of ultimate health is excessive. The only instances of diabetic cataract, enlarged liver, dwarfism, or other similar complication noted in our series of over 200 diabetic children have been seen in children who failed to follow the described regimen. Unmodified insulin, given as frequently as four times every twenty-four hours,

has served to control the diabetes in these children in an excellent manner, and the prescribed regimen has been one which the average household has been able to follow. We have records of many children who have been under the described management for periods of eight, ten and even fifteen years with outstanding success. Their appearance is that of vigorously normal healthy young people. They represent a good example of an endocrine problem which arises in childhood, and the favorable results which combined treatment can accomplish.

In conclusion, it seems important to think of the child in terms of his whole existence, and treat not only the child but also his environment. In certain well-defined conditions such management includes consideration and treatment of the endocrine functions. In obscure conditions where endocrine relationship is questionable or doubtful, more good and less harm will be accomplished through general measures than through efforts directed aimlessly toward endocrine therapy.

IMMEDIATE REPAIR OF FLEXOR TENDONS*

R. E. Speirs, M.D.

Dodge City, Kansas

The actual value of the hand is indeterminate. Even after its loss the resultant handicap is seen in regressive personality changes as well as economic losses. At best, results from hand injuries decrease the efficiency of the injured person. To obtain the best results in injured members, there are certain fundamental principals which should be followed. It is only after covering most of the literature now available that these facts can be collected and properly applied. Realizing that the average surgeon does not see enough of these cases to warrant his reviewing the literature, nor does he have the time and necessary library facilities to do so, an effort has been made to present in a simple manner the essentials of immediate tendon repair.

Knowledge of the anatomy and function of the individual tendons and nerves of the hand and forearm is the first consideration as only by knowing this is it possible to make an accurate determination of the damage done and what surgical procedures will be required. For a consideration of the anatomy you are referred to an anatomy book. A quick review is essential before going to the operating room but

it might be added that unless one is familiar with the details it will be of benefit to take the book into the operating room with them so that they may refreshen their knowledge as the repair proceeds.

When the patient is first seen a sterile dressing should be applied to the injury; bleeding is best controlled by the use of a tourniquet. The extent of injury is next determined by observation of function of the hand and not by probing or exploration. The flexor profundus digitorum flexes the distal phalanx of the four fingers. Its position may be remembered by saying the poor (profundus) are always on the bottom. The flexor pollicis longus flexes the distal phalanx of the thumb. The flexor sublimus digitorum flexes the middle phalanx of the four fingers. The flexor pollicis brevis the proximal phalanx of the thumb. It occasionally happens that a laceration over the side of the proximal phalanx seems to sever the profundus but not the sublimus tendon. This is accounted for by the fact that the laceration is distal to the point (mid proximal phalanx) where the sublimus divides to insert into either side of the middle phalanx and only one slip has been severed.

Severance of both tendons are easily recognized as the injured member remains in extension.

Lacerations over the hypothenar area of the hand are not frequent. It results in loss of ability to abduct the fifth finger and cup the ulnar side of the hand.

Injuries to the thenar area are more common and result in great loss of function if not repaired. The motor branch of the medium nerve passes distalward just to the ulnar side of the thenar eminence laying under the palmar fascia and on the tendons. Injury to this nerve results in inability to rotate and abduct the thumb, loss of sensation over the thumb index, middle and radial side of the ring finger. It is commonly injured when the flexor pollicis longus has been severed in the thenar region.

It is occasionally difficult after examination of a cut wrist to say just what the extent of injury has been—this is due to the fact that the hand can be flexed after the flexor carpi radialis, ulnaris and palmaris longus have been cut, through the action of the flexors of the fingers and thumb. In the same way it is not possible to tell how many tendons of the flexor digitorum sublimi muscle have been separated until the wound has been explored because the flexor digitorum profundus will flex the fingers although clenching is not possible. Injury to the median and ulnar nerves is always present until proven otherwise.

Indications for treatment that is to be given must be determined by the time which has elapsed be-

*Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 14, 1940. (Exhibit of the Ford County Medical Society.)

Clinical Material and Experimental Work done at Receiving Hospital—Wayne University, Detroit, Michigan.

between the occurrence of the injury and when the patient is first seen as well as taking into account the character of first aid given. It may be generally stated that tendons in the fingers and hand should not be repaired after six hours and those of the wrist after eight hours. Friedrich¹ has shown that after this period of time the organisms present have become acclimated to their new environment and cannot be removed by mechanical cleansing and debridement.

In the operating room a tourniquet should always be used as it not only hastens work but makes it much easier. A blood pressure cuff is the most satisfactory. The arm should be elevated for a few moments while the blood pressure cuff is applied. It is inflated to about 250 mm. mercury. This should be deflated every forty-five minutes to rest the patient's arm and to permit a new influx of blood. In preparation for surgery the dressing is removed except that portion covering the wound. The surrounding skin is carefully washed with soap and water, then the wound is gently irrigated with normal saline; antiseptics are unnecessary and not infrequently irritating to the delicate gliding surfaces of the tendons and their sheaths.

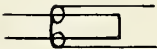
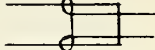
In most places general anesthesia is considered as being the most satisfactory for it gives complete relaxation, the tourniquet does not cause discomfort and the surgeon does not have to worry about the mental status of his patient during an often long, tiresome procedure. There is also the possibility of further damage to already injured tissue by local infiltration. However, local anesthesia has its advantages. It is more frequently used as a regional block, be it brachial plexus, at the wrist or fingers, than as local infiltration. When local infiltration is used the needle is inserted away from the wound margins but directed towards the wound so that the infiltration will tend to wash any remaining foreign matter out of instead of further into the depth of the wound. A cooperative patient can assist in locating the severed tendon ends but more especially at the end of the operative procedure he is conscious and can move the injured member. The structures should be in the same anatomical position as before the injury occurred and should therefore be capable of giving a normal range of motion. In this manner one may determine the necessity of reconstructing the pulleys. The chief disadvantages are that the time passes much more slowly to the patient than to the surgeon, the tourniquet causes considerable discomfort and must be released from time to time and also the fact that tension on the proximal tendon occasionally causes pain and the patient stiffens pulling the tendon away.

Let it suffice to say that the smallest instruments

available be used. The standard size of operative tools are entirely too large for tendon and nerve repair.

The type of suture material to use has long been discussed, but it is now well known that tissue reaction to catgut is greater than to silk². The best grade of No. 0 or 1 silk is most satisfactory. Stainless steel causes little reaction but is inadvisable because of the difficulty in using it without causing undue injury to the tendon. The technique emphasized by Halstead³ should be followed—that is, fine size of suture, small bites, interrupted sutures, cut close to the knots and rigid asepsis. If there are contra indications to the use of silk, the wound should not be repaired.

The type of stitch to use in repairing tendons is based upon observations from suturing the achilles tendon in dogs. Silk, catgut, plain and chromic, and stainless steel wire were used. There was definitely more tissue reaction to the catgut than to the silk or wire. Stitches as represented below and others were used. The elaborate stitches, while they look well, are actually detrimental—weaving through the tendon tends to tear it and the suture pulls out—permitting further tendon separation. Mason and Shearon⁴ have an excellent article on tendon healing in which they have shown that the tendon ends retract from one to two cms. This was found to be true in our dogs. Because of this retraction there is no value in using approximating stitches as they merely pull out and fall between the tendon ends acting as a barrier to healing.

The best type of stitch seems  

to be, the latter should decrease the amount of tissue reaction around the tendon providing small needles are used, that do not shred the tendon.

Most lacerations of the fingers, hand and forearm run transversely. Since it is not possible to find the tendon ends through such a wound, enlargement is necessary. Mid-lateral incisions are best on the fingers but should not be long enough to destroy the pulleys. Not infrequently it is better to make a second separate incision than to keep extending the primary laceration. This is especially true when the laceration is close to the metacarpal phalangeal joint or the flexor pollicis longus is severed as retraction is considerable. In these places the tendons move in a straight line and they are loosely attached by peritendon which permits a wide range of motion. (Fig. 1 and Fig. 2.)

The incisions should follow the lines of the flexion creases, for a cut down the middle of either the finger, hand or wrist tends to form flexion contractures which are often quite deforming. Mid-lateral

incisions should be used on the fingers so the digital nerve, arteries and veins are not severed. This

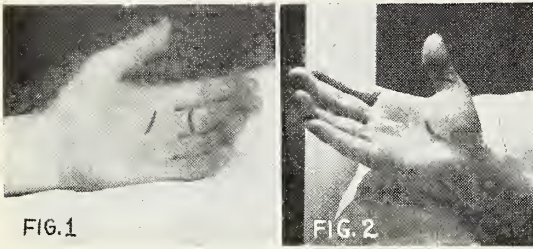


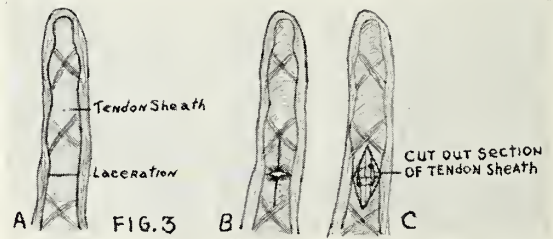
Fig. 1. Secondary incision for locating flexor tendons in the palm. Fig. 2. Secondary incision for locating flexor pollicis longus in the palm.

incision is just anterior to the midline on the lateral side of the finger.

The palmar incisions are made near and parallel to the distal flexion creases of the hand or thenar flexion crease. By making the secondary incisions the proximal end of the tendon can be quite readily found after separating the palmar fascia. A small opening is made in the synovial sheath and the proximal tendon end delivered. A mattress suture is placed into the tendon, the sutures are threaded through the canal by using a probe and the tendon pulled through. The flexor pollicis longus usually lies more deeply than is anticipated. The incision along the thenar flexion crease should not pass proximally too far as the muscular branch of the median nerve to the thenar muscles passes over the tendon sheath one fingers breadth distal to the transverse carpal ligament and just to the radial side of the palmaris longus.

The tendon sheaths are strong fibrous aponeuroses which extend from the point of insertion of the flexor digitoris profundus tendons proximally to the distal flexion crease of the palm. They attach to either side of the phalanges. These fibrous sheaths are lined by the synovial sheath which encloses the tendon and gives a smooth gliding surface. In the thumb and little finger they continue proximally as the radial and ulnar bursae. The tendon sheaths hold the tendons close to the phalanges so that motion of the individual joint is possible. For this reason the structure must be conserved; it is always necessary to enlarge the opening in the tendon sheath before the severed tendon ends can be found and sutured. The line of incision for elongation should be placed laterally close to the point of insertion A. This prevents the flaps from falling between the ends of the tendon when they separate. If the incision is made down the midline of the sheath there are four corners to fall between the tendon ends B. This also lends to a narrowing of the tendon sheath at this point, to more scarring and possibly a contracture. Where the flaps tend

to fall between the tendon ends it is best (Fig. 3) to cut them away leaving a defect providing this will not be extensive enough to destroy the pulleys C—where pulleys will be destroyed a second incision should be made. If the pulley is damaged so that herniation of the tendon occurs on flexion of the fingers it must be repaired. This may be done by using a tendon or fascia graft. This graft should pass over the dorsal surface of the phalanx beneath the extensor tendon anterior to the flexor sheath sewing it together with the suture line placed laterally, thus making a loop.



The synovial sheath covering the tendon carries a portion of the blood supply and provides the gliding surface. The tendons tend to retract more than the synovium which then falls over the tendon ends. The ends seal and a little blood collects within this pocket giving the appearance of a small hematoma. If this is kept in mind a great deal of time will be saved in looking for severed tendon ends. This is especially true above the wrist. The tendon usually lies up the canal a centimeter or so.

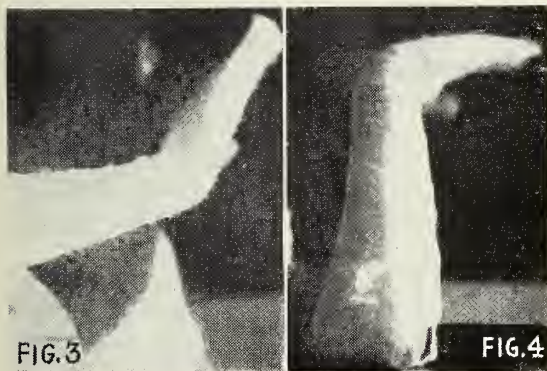
The tendon ends can sometimes be found more easily by flexing the elbow, wrist and fingers—milking of the forearm seldom has any value in bringing the tendon ends into view. Blindly reaching into a tendon canal for the severed end is not only damaging but rarely successful. The least harmful, most rapid and satisfactory way to find the ends is by enlarging the incision or by secondary incisions. After the tendon ends are found they should be treated with the greatest care. They should be held securely and gently with small instruments. The sutures should be placed immediately so that further manipulation of the tendons can be made by traction through the suture rather than by instrumentation. If the ends are jagged they should be cut squarely across with a sharp knife. After repair of the tendons, the wound is gently sponged to see that all bleeding is controlled. This should be absolute. It is not possible to close the defect in the tendon sheath; efforts to do so usually result in further trauma. Digital nerves should be approximated as well as possible. The interossei and lumbricals should be sutured after which the skin edges are closed.

The period of immobilization after repairing tendons is dependent upon the process of healing. Mason and Shearon⁴ in their extensive study on tendon healing in dogs found that the defect after retraction of the tendon end is filled by a fusion of the sheath and peritendinous tissues. The sheath tissues tend to unite early but the tendons do not show mitotic figures until the fourth day. At the end of the first week the union is mainly the result of proliferation of the sheath. After the third week the union is substantially due to the tendon itself. By this time the sheath tissues are still adherent but are beginning to assume their gliding character. The structures are now quite strong but can be stretched. For these reasons immobilization should be maintained for a minimum of three weeks.

A sugar tong type of mold either plaster of paris or aluminum is used for flexor tendons, this fixes the elbow at a right angle; flexes the wrist at about seventy-five degrees and holds the fingers in slight semi-flexion. The elbow should be immobilized as part of the flexor muscles originate from the medial epicondyle of the humerus.

After the flexor pollicis longus has been repaired, the wrist should be flexed to seventy-five degrees, the thumb adducted and the index finger fixed in semi-flexion.

Extensor tendons are immobilized by hyper-extension of the wrist with the fingers extended in a position of comfort. (Fig. 3 and Fig. 4.)



After a three weeks' period of immobilization has passed physiotherapy is instituted. This consists of hot water baths, massage—active and passive motion. It must be remembered that although healing is fairly solid, in some cases the point of union can still be stretched or even pulled apart. A marble or soft rubber ball is a convenient article for giving exercise. From the beginning it should be impressed upon the patient that full cooperation and a long period of time will be necessary to give a good result.

The first few days following repair motion will

be present in the injured member—however, the patient should be advised against movement. This motion slowly diminishes and at the end of a week there is none. A return of function begins after a month or two. It continues to improve for three or four years. Not infrequently a finger which has practically no motion after six months will have almost complete return of function after one and one-half years. As long as there is some motion of the distal phalanx after a few months a good result should be expected. The practice of re-operating upon tendons from three to six months after primary repair is for the most part not justified, if any movement is present, as sufficient time has not been allowed for Mother Nature to reform gliding surfaces.

In general, it may be said that ninety-five per cent good results will be obtained for extensor tendons; flexor pollicis longus ninety per cent; flexors in the wrist eighty-five per cent; in the palm and in the fingers sixty-five per cent.

BIBLIOGRAPHY

1. Mason, Michael L. "The Immediate and Delayed Tendon Repair," *Surgery, Gynecology and Obstetrics* 62, February, 1936, 449-457.
2. Howes, Edward L. "Strength of Wounds Sutured with Catgut and Silk," *Surgery, Gynecology and Obstetrics* 57, September, 1933, 309-317.
3. Howes, Edward L. "Strength of Wounds Sutured with Catgut and Silk," *Surgery, Gynecology and Obstetrics* 57, September, 1933, 309-317.
4. Mason, Michael L. and Shearon, Clarence G. "The Process of Tendon Repair," *Archives of Surgery* 25, October, 1932, 615-692.

Ten states have legally adopted by statute the American Medical Association's method for computing visual disabilities in compensation cases, the Association's Committee on Visual Economics reports in *The Journal of the Association* for August 3.

The method, evolved from a report which was approved by the Association's House of Delegates fourteen years ago, is now legally sanctioned by the U. S. government and the following states: Kansas, Maine, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Washington, Wisconsin and West Virginia. "In many other states in which no method has received legal sanction," the report says, "this method is employed by labor commissions and by ophthalmologists (eye physicians)."

In an effort to bring about a greater uniformity in the administration of compensation laws for loss of visual acuity, the committee has made a complete review showing the variations in the compensation statutes and laws of all the states. It points out that twenty-five states have not legally adopted any method for rating permanent partial visual disability. Twenty-one states have adopted statutory schedules for such loss. One state, Mississippi, has no visual compensation law, and another, Arkansas, has recently passed a law which has not as yet been adopted by the electorate.

There is also wide variation in such factors as the number of weeks for which compensation is given for the loss of the use of one eye or for the loss of an eyeball, the percentage of average earnings which form the basis for compensation, and the visual factors used in computing loss.

BIOLOGICAL AND BIO-CHEMICAL STUDIES OF CURARE

PRELIMINARY REPORT

M. E. Pusitz, M.D.*

J. L. Lattimore, M.D.**

Allen Gold, M.A.**

Harry Ebendorf, M.T.**

Topeka, Kansas

The object of this study is to follow up the work of Burman, in the treatment of cerebral palsy. Since there is no commercial source of curare for therapeutic purposes, and since so many variable statements had been made by commercial concerns, experimental studies were made before using it on clinical material.

Source: "Curare" is a general word for "poison", as used by the South American Indians. It is not, therefore, the name of a particular drug or poison. It is a mixture made from the decoction of the bark of *Strychnos Castelnoei*, to which is added the leaves of *Petiveria alliacea*, the stems of *Dieffenbachia*, etc. By evaporation, a thick syrup is formed, which is poured into bamboo containers, or gourds, or pots, and allowed to dry. Fermentation processes evidently take place in the syrup if stored in this form. If allowed to dry it presents a very dark brown or nearly black extract, resembling black catechu. That imported in bamboo is brown and granular, the broken fragments frequently exhibiting crystals large enough to be visible to the naked eye.

For our experiments, we obtained the dessicated powder, through the courtesy of the Gill-Merrill Expedition. This had no odor but did have a bitter taste. It came in two lots; a form botanically authenticated by R. C. Gill, and an unauthenticated form, which he had received from natives.

PREPARATION OF ACTIVE PRINCIPLE

Five gms. of the dessicated powder were allowed to 1000 cc. of triple distilled water. Since the mixture contains insoluble resinous products as well as the curare derivatives, a residue remains at the bottom of the flask. At first, the material was allowed to macerate in the solution for some days, but it was soon realized that the active principles in curare are very soluble, and dissolved quickly. The solution was then filtered, the filtrate being dirty brown in color, and containing the active principle. The sedi-

ment was darkish brown or black in color and did not contain the active principle.

The filtrate was placed in serum bottles (fifty cc.) with rubber stoppers. After autoclaving the fluid was a darker brown, and there was some precipitate of fine particles of dark brown or black color. When this was allowed to settle the supernatant fluid was a clear amber color. The amount of precipitate was very small and much darker in color than the fluid. This precipitate had very slight activity.

Since five grams of curare were added to 1000 cc. the strength of the solution was termed as five mgm. per cc. This was technically incorrect since it did not take into consideration much inert material. From a biochemical standpoint an assay of the solution should be conducted after the active principle is dissolved.

It was found that the authenticated solution was very weak (as compared with the unauthenticated) but it could be concentrated by evaporation in the water bath so that very concentrated powerful solutions resulted. For example, one such concentrated solution was assayed, and it was found to contain 3.36 gm. per 100 cc. of solution. The injection of one-half cc. per kilo of this solution subcutaneously was fatal within one minute to the rabbit. The original solution was not fatal even with injection of thirty cc. Since then even stronger solutions have been obtained so that one-tenth of a cc. per kilo is fatal.

RATE OF ABSORPTION

The active principle of curare passes through animal membranes with difficulty, so that if the drug is taken by way of the alimentary canal, it is absorbed so slowly that it can have no appreciable effect, aside from that of a stomachic tonic. Subcutaneous, intramuscular and intravenous administration, however, permits of such rapid absorption as to allow the poisonous character of the drug to manifest itself.

With the unauthenticated solution, we found that a dose of 10.5 mgm. per kilo of body weight was lethal to rabbits. This would be contained in approximately 2.1 cc. of solution. If this amount of solution were diluted ten times, so that it became twenty-one cc., and the entire twenty-one cc. injected into the rabbit, it was no longer lethal. The animal was still receiving 10.5 mgm. per kilo. The solution was not altered, as shown by the fact that if the twenty-one cc. of the present solution was concentrated by evaporation in the water bath back to 2.1 cc., and then injected, it was now lethal again. It was not, therefore, due to any loss of the active principle itself, but rather the whole phenomenon depended upon the rate of absorption of the drug.

Even the authenticated solution could be lethal

*Orthopedic Surgeon, Kansas Crippled Children Commission, Capper Foundation for Crippled Children.

**Lattimore Laboratories, Topeka, Kansas.

when injected into the vein instead of subcutaneously. Thus, in one rabbit, when as high as 32.5 mg. per kilo were injected subcutaneously, there was not even definite paralysis, although the rabbit became somewhat restless. But the injection of 9.3 mg. per kilo, intravenously, was lethal, and the rabbit died in one and a half minutes.

The conclusion was, therefore, that since the rate of absorption was an important factor in the lethal effect of the drug, all injections experimentally would be subcutaneously in the rabbit. Clinically, it was felt best to make all the injections intramuscularly, and not intravenously. Certainly it was felt that the first dose should not be injected intravenously. Subsequent doses might be injected intravenously, if there was great tolerance to the action of the drug.

In a series of experiments, it was determined that the activity or toxicity of the drug varied, depending upon the dilution. But for any particular dilution, the action was fairly constant. This is important from a commercial standpoint, and shows that it should be possible to standardize effects, but only if the active principle is used in proper dilution. The ratio between the extent of dilution and the seriousness of the effect was not determined.

REFINEMENT OF DRUG

The exact composition of curare is still to be determined, but essentially there are a number of substances, of which two are alkaloids, namely curarine and curine. In addition, there is a substance which gives the clear amber color, if this is not due to one or both of the alkaloids. Most investigators describe not only a paralytic action of the drug, but also what may be called a toxic action, which manifests itself particularly on the circulation. West believed, that this was due to curine.

A series of experiments dealt with relatively concentrated solutions of the drug. As a reagent to present the proper ion, phosphate solution was used since the phosphate ion is relatively non-toxic. Thus twenty cc. of a 10:1 concentration of authenticated curare solution was allowed to receive three cc. of a saturated aqueous solution of K_2HPO_4 . A precipitate was formed, which was of a brownish color. This precipitate was active but did not have the activity of the original, and on injection seemed to be very painful. But injection of the phosphate ion, was also painful, so that this was not due to the active principle. The filtrate from this solution was of a yellowish or light amber color, and was very inactive.

It is, therefore, possible to influence the active principle by precipitating it from its solution by the

action of the phosphate ion, using relatively concentrated solutions (following the mass law).

With relatively less concentrated solutions a very peculiar phenomenon was noted. Thus fifty cc. of the unconcentrated unauthenticated solution was allowed to receive five cc. of a saturated phosphate solution. Again there was the formation of a precipitate, which was of a brownish color. The precipitate of this experiment was relatively inactive. The filtrate from this experiment, however, was colorless and clear. This clear solution contained the active principle.

The active principle from this clear filtrate did not seem to have the lethal qualities of the original solution. The reaction after its injection was obtained more slowly. Thus the paralysis did not appear for over an hour, and this paralysis was not complete. It was maintained, however, with decreasing intensity until the rabbit was sacrificed for other purpose one hour and fifty minutes later. There was no deleterious effect on respiration.

It would, therefore, seem possible to separate the color principle from the active principle; the toxic principle from the active principle. It may be possible that from the crude curare solutions, certain drugs may be isolated which would give a more slowly appearing but longer maintaining action, and that this action would be less apt to involve the phrenic nerve, and thus affect respiration.

ACTION OF CURARE PRINCIPLE

In mammals, as a result of involvement of the phrenic nerves, there is paralysis of the diaphragm, resulting in death from asphyxia. With cessation of respiration, the heart usually continues to beat for some short time. It takes a fairly large dose to affect the arterial pressure, through paralysis of the peripheral ganglia, with dilation of the blood vessels, and consequent fall in blood pressure, rapid pulse, and so forth.

Effect on normal tonus: Claude Barnard demonstrated that curare paralyzes muscles by affecting the terminations of the nerve within the muscle, probably the end plates themselves. Our own experiments performed on fifty-eight rabbits, to determine the effect of curare on normal reflex tonus (in the intact animal), gave the following results. There is a definite difference in different animals as to the susceptibility of the organism to the drug, and, therefore, much of this work must be interpreted with caution. With very small doses, for example, the subcutaneous injection of eight mgm. of unauthenticated curare solution per kilo of body weight, there was at first an excitability or restlessness. Whether or not, as Tillie has maintained, there is a primary excitation of the spinal cord, could not be de-

terminated. In ordinary poisoning, this would be masked by the paralysis of the motor nerves. This apparent excitability does not last very long; after ten to fifteen minutes there is a lessening of irritability. The rabbit becomes less frisky. If stimulated it will react much as in the normal, but without stimulation it seems perfectly content to simply rest. In about sixty minutes this fatigability has entirely worn off and the rabbit is as frisky as before.

With larger doses there is a progressive series of effects. With an injection of 9.5 mgm. per kilo there is the same initial restlessness which is followed with fatigability. At the end of about fifteen minutes there is a drooping of the ears. This is soon followed with inability to hold up its head. There is a tendency for the rabbit, as a whole, to sink to the ground, the body elongates, and there is mild paralysis or atonia, particularly of the hind limbs. There is no complete paralysis and these animals are still capable of carrying out efficient muscular contractions. If stimulated they will carry out movements although they are not as definite or as frisky as one would expect. The atonia appears in about twenty minutes after the injection and may last an hour or more, finally decreasing in its intensity until the animal approaches normal. But even with these doses there remains a tendency to fatigability so that the rabbit is not as frisky as the normal, and may remain so from twenty-four to forty-eight hours. However, while they may not seem as frisky, when stimulated—for example, touched with a stick, they react with convulsive reflex action.

It could not be determined that there was any definite effect on the pulse or on the circulation. There was no cyanosis evident in the examination of the ears.

With a dose of 10.0 mgm. per kilo there were essentially the same effects except that the atonia went on to moderately severe paralysis, affecting the hind limbs before the fore-limbs. With this definite paralysis, the rabbit flattened out on the ground, then fell over on its side. Muscular contraction could be carried out inefficiently, if at all. The paralysis appeared twenty to twenty-five minutes after the injection, remained at its maximal effect for some thirty minutes and then decreased in intensity until the paralysis was evidently cleared up within sixty to ninety minutes. Respiration was somewhat more rapid, and possibly shallower. The pulse was more rapid and rather thready.

With a dose of 10.5 mgm. per kilo body weight, the progression of symptoms was as before except that the paralysis of the extremities was complete, and came on in ten to fifteen minutes. In twenty minutes there was a definite involvement of respira-

tion which became rapid, shallow, and labored. Respiration ceased at the end of thirty minutes, and there was extreme cyanosis of the ears. The animal died through asphyxia, with cessation of respiration, the heart continued to beat, however, for a short period of time.

These findings differed for different batches of solution (made up with varying technics, or solubilities), but remained very constant for a particular solution.

There is demonstration of the rather small latitude from an effective dose to a dangerous dose in these experimental animals. This is important clinically since not only are the motor impulses in general affected, but the phrenic nerve is also involved. This makes it essential that the drug be well standardized before humans be routinely subjected to its use.

Elimination of drug: The action of curare is a transient one, acting as a physiological block at the neuromuscular junction. If the dose is large enough then there is paralysis of the diaphragm, with cessation of respiration. If the animal is tided over this period of respiratory failure (artificial respiration), it makes a full recovery. The more concentrated forms of curare can cause death within a minute or more—but in such instance, the rabbit passes through a convulsive stage, and dies of cardiac failure almost as soon as respiration ceases. This would indicate a toxic rather than a paralytic action. If the rabbit is not killed at the apex of curare action, it makes a complete recovery within one to four hours, aside from "fatigability". This latter symptom may last twenty-four to forty-eight hours—but if no further drug is administered, at the end of this time there is absolute and complete recovery.

There is some evidence to show that the alkaloid (s) is destroyed in the liver, and quickly removed from the circulation by the kidneys.

Action of antagonists: An old observation in the experimental laboratory (working with muscle-nerve mechanisms) has been that the action of the curare may be cut short at any time by the injection of salicylate of physostigmin. That there is an epinephrine-curare antagonism was noted by Panella in 1907, and recently studied by Bremer. Some of the older text-books considered strychnine and atropine as antidotes.

Our own experiments were inconclusive. Injections of the second drug were made at varying intervals of curare intoxication and at times repeated. Mecholyl aggravated rather than relieved, seemingly being a synergist. It caused pulmonary oedema and congestion of the lungs, and collapse in one case. Strophanthin and picrotoxin did not change the symptomatology, but may have been synergistic.

Nembutal had no appreciable effect. In all instances, lethal doses remained lethal doses (artificial respiration was not resorted to).

Effect on abnormal tonus: Experimental investigations of the effect of curare on certain tonic states have been made by Bremer and reported in 1929. He found that it was possible by the injection of a very small dose of curare intravenously (0.25 mg. per kilo of body weight) to abolish or to diminish considerably the extensor rigidity of decerebrate cats, without apparently affecting their phasic motricity, and also local tetanus.

CLINICAL EXPERIMENTS

In the human the exact amount of time required for excretion has not been worked out, but it certainly is excreted in a few hours, unless the dose is very massive, such as when the drug is really used as an arrow poison.

Clinically, we found it is best to begin with a minimal dose, and work upwards gradually until an effective dose is reached. Since Bremer has shown that there is a selective action on hyper-innervated muscles and since in the particular problem at hand what was desired was release from hyper-innervation rather than atonia, or paralysis, only one-tenth of the lethal dose in rabbits has been the starting point in all our clinical work. The first dose is usually of very little effect, if any. As one works upwards, an efficient dose is reached. One should not repeat doses within two to four hours—since rabbits have still exhibited effects of the paralysis for at least this length of time. One of the signals for an effective dose in humans is the drooping of the eyelids. One should pass this dose with caution.

The clinical work was carried out upon one individual with moderately normal tonus, but with peculiar gait, seven cases of cerebral palsy, and one case of Parkinsonism, due to encephalitis. The solution used was the aqueous extract of unauthenticated curare, with a strength of five mg. per cc. of solution. (i.e. five mg. crude drug).

In one particular case of cerebral palsy, a child twelve years of age, and weighing about sixty pounds, it was noted that her response was very striking. Since she had tremors, athetoid movements, as well as true spasticity, a progression of effects was very clearly demonstrated. The first effect of injection of five cc. was crying with pain. Restlessness appeared within a few minutes. About ten to twenty minutes after the injection, the child complained of a heaviness of the eyelids, and soon there was ptosis (bilateral). When six cc. were used, there were further symptoms as nystagmus, diplopia, etc., evident weakness of the muscles of the neck, so that the head has a tendency to droop (this may be considered similar

to its effect in the rabbit). There was difficulty in speech, which may be due to weakness of muscles, and weakness of the jaw, so that chewing of hard material was carried out with difficulty. At this stage, there was a peculiar expression of the face, due to inability to grimace, or to fear. With further lapse of a few minutes there was weakness of the muscles of the trunk, and finally loss of tremor of the fingers and hand. With the six to seven cc. injection, it was very difficult to determine whether there was any paralysis of the extremities. There was definite loss of the tremor of the fingers, fewer athetoid movements, and possibly there was some "fatigue". When this injection was given twice a week, after three weeks, there was some definite carry over, at least of the fatigue element, so that there appeared to be less spasticity of the upper extremities (and also of the lower). With eight cc., the relaxation was greater, but there was still no paralysis. With a dose of nine cc. the effect was more striking, and still more so with ten cc. The patient now demonstrated some weakness of the extremities, particularly of the lower extremities, tendency for drooping of the head, and a sort of buckling of the body, arcuate fashion, but the patient still had the use of all the extremities. The atonia appeared after about twenty minutes and lasted only about thirty to sixty minutes. But there remained a weakness or lassitude which seemed to carry over well into the next day. There were no complaints as to breathing. There was, however, light-headedness, an irregular pulse (which at times was rapid and at times slow) and a definite drop in blood pressure (eight-sixteen mm.). There was elevation of temperature to 101-102 degrees, which varied, but remained elevated for twenty-four to forty-eight hours. The dose was changed back to five-six cc. twice a week. The weakness continued to some extent, but there was a gradual pick up. However, the patient did not return quite to the former stage of spasticity and athetosis and the tremor remained lessened. With cessation of the use of the drug, it took about two weeks for the return of the former strength (or spasticity).

The drug does have a definite selective effect. It does not require as much to lessen tremors as to affect spasticity, even athetosis can be affected by a much smaller dose than spasticity. The spastic muscles were affected with smaller dose than those which would affect normal tonus (the injection of seven cc. in a case with almost normal tonus, but similar weight, had practically no effect aside from some possible heaviness of the eyelids). Since a paralysis is not necessary but rather lessening of hypertonicity, we did not exceed the above doses. There was no doubt

that this patient had improved, but she had intensive physiotherapy, muscle education, and occupational therapy all during this time.

In one case of cerebral palsy, only the drug was used, with no muscle education. The findings were somewhat similar as long as the patient received the drug. After cessation of the drug, the patient returned to the former status. It could not be said that there was any beneficial effect.

In one case of severe cerebral palsy who did receive physiotherapy, but poor muscle education, there was improvement not only in the extremities, but also in speech. The improvement in speech remained to greater degree. It may be that the curare was just the thing to enable proper proprioceptive sensations to be experienced and linked up with speech movements. This child was not under treatment from the speech expert. The child is now able to sit by herself for the first time in her life. It is difficult, of course, to gauge how much of this was really due to the use of curare since there was intensive physiotherapy as well as some muscle education.

The continued use of the drug finally produced a state in which there is so much lassitude and weakness that we were somewhat concerned. The use of the drug was discontinued. Cases receiving proper muscle education held much gain. The two cases who did not receive such treatment returned to their former status.

In one case of cerebral palsy, with severe ataxia, the result of curare injections seemed to be negligible. In fact, when the drug was pushed too far (eleven cc.), there seemed to be aggravation of the instability (lack of equilibrium), probably due to weakness.

With larger doses, there was a progression of symptoms. Thus first there would be momentary pain at the site of the injection, which would be followed with general restlessness. The first objective symptom is the drooping of the eyelids, which goes on to complete bilateral ptosis. There follow nystagmus, and diplopia. These symptoms appear before the weakness of the neck muscles, and the drooping of the head, then the arching of the back, due to weakness. There is a blank expression of the face, weakness of the jaw muscles, and inability to speak clearly. The paralytic effect or rather atonic effect on the extremities is the last symptom, and did not appear until twenty minutes or so after the injection. With the doses used, there was no demonstrable effect on respiration, nor was there true paralysis of the extremities. Larger doses—such as are used by Bennett to prevent convulsive seizures, in metrazol therapy, will produce paralysis of the extremities before the respiratory system is affected.

CONCLUSIONS

1. It is possible to standardize curare, but this will require further investigation.
2. Curare has no destructive action; it results in physiologic nerve block, at the neuromuscular junctions. If the patient is not killed by the dose (massive) at or very shortly after injection, then the patient will make a full recovery.
3. There is a selective action of the drug, so that its least effect is on normal tonic muscles. It has increasing effect on hypertonic muscles, athetoid movements, tremors, fatigability. The least dose will be required for tremors; the largest for hypertonia. Where paralysis of muscles is desired, the largest doses of all will be required.
4. Curare must be looked upon as merely a "physiological block". It can have no curative value in itself. Any effect which it may have is entirely due to some form of muscle education (purposeful or not), which is instituted at the time or after curarization. For example, the improvement in speech which remained after cessation of curare therapy was not so much due to the drug as to the fact that there was a period of "rest", so that proprioceptive sensations could be experienced and linked up with motor function.
5. Although curare has no curative effect, as an adjunct in treatment, its possibilities have not been explored.

BIBLIOGRAPHY

1. Wells, Spencer T.: Three Cases of Tetanus, in which "Woorara" was used. *Proc. Royal Med.-Chir. Soc. London* 3; 142, 1858-61.
2. Jousset: Du Curare au point de vue therapeutique, *Bull. gen. de Therap.* 69; 294, 396, 1865.
3. Bernard, Claude: Note sur la Curarine et ses Effects physiologiques, *Bull. gen. de Therapeutique* 69; 23, 1865.
4. Benedikt, M.: Positive Resultate Zur Curare-Therapie, *Wiener Med. Presse* 7; 791, 806, 1866. *Therapeutische Versuche mit dem amerikanischen Pfeilgifte (Curare)*, Sitzung des K. K. Gesellsch. der Aerzte am 20. Jan. 1864. *Allg. Wiener Med. Ztg.* 10; 29, 1865.
5. Voisin, A. and Liouville, H.: Des Phenomenes Physiques produits per le Curare chez l'homme. Doses qu'on peut donner. *Indications therapeutiques*, *Gazette des Hopitaux* 39; 430, 438, 443, 1866.
6. Royer, C. L.: Curare or Woorara—Can it be Used Therapeutically? *New Orleans Med. & Surg. J.* 3; 202, 1875-6.
7. Hoffman, F. A.: Ein Fall von Tetanus Traumaticus mit Curare Behandelt, *Berliner Klin. Wchnschr.* 16; 637, 1879.
8. Steiner, J.: Das amerikanische Pfeilgift Curare, *Habilitationsschrift Univ. zu Erlangen Leipzig*, 1877. Verlag Veit and Co.
9. Watson, B. A.: Woorara—Its Medical Properties and Availability for the Treatment of Disease, *Virginia Med. Monthly* 9; 1, 1882-3.
10. Lehmann, George: Zur therapeutischen Wirkung des Curarinum Sulfuricum, *Allg. Ztschr. f. Psychiatrie* 41; 338, 1884-5.
11. Peterutti, G.: Interno ad alcune Applicazioni terapeutiche del Curaro, *N. Rivista Clin.-Therap. (Napoli)* 1901, vol 4, p. 297.
12. Frankforter, G. B. and Newton, H. M.: A Chemical Study of Curare, *Science*, n.s. 24; 199, 1906.
13. Tsocanakis, G. D.: De l'Action therapeutique du Bromhydrate de Cicutine et du Curare dans les Etats Spasmodiques, *These de Paris*, 1923, pages 64. Amedee Legrand, Editeur, Paris.
14. Kainukschis, V. and Kutorga, V.: Versuche die Muskelrigiditat beim Parkinsonismus durch Injektion von Kurare zu beseitigen, *Munch. Med. Wchnschr.* 74; 537-8, 1927.
15. Bremer, Frederic: The Tonus and Contracture of Skeletal Muscle, *Archives of Surgery* 18, 1463, 1929.
16. de Almeida, Miguel Otorio and Moussatche, H.: Action du Curare sur Les Contractions, *Compt. Rend. Hebdo. des seances et Men de la Soc. de Biol.*, 117; 499, 1934.
17. West, R.: Intravenous Curarine-Treatment of Tetanus, *Lancet* I; 12, 1936. *Pharm. & Therapeutics of Curare and its Constituents*. *Proc. Royal Society of Medicine*, 28; 565, 1935.
18. Rosenblueth, A.; Lindsley, D. B.; and Morrison, K. S.: A

Study of some decurating substances, *Amer. Journal of Physiology*, 115: 53, 1936.

19. Briscoe, Grace: The antagonism between curarine and prostymin and its relation to the myothenia, *Lancet* 1: 468, 1936.

20. Pusitz, M. E.: The Treatment of Spastic Paralysis, Thesis, 1938.

21. Burman, Michael S.: Curare Therapy for the Release of Muscle Spasm and Rigidity in Spastic Paralysis and Dystonia Musculorum Deformans, *The Journal of Bone and Joint Surgery*, Vol. XX No. 3, p. 754, July 1938.

22. Pusitz, M. E.: The Treatment of Cerebral Palsies From The Standpoint of the Physical Therapist, *The Physiotherapy Review*, Vol. 19, No. 5, 1939.

23.: Speech Correction in Cerebral Palsies, From the standpoint of the Neuromuscular Specialist, *Journal of Speech Disorders*, Vol. 4, No. 3, September, 1939.

24. Bennett, A. E.: Preventing Traumatic Complications In Convulsive Shock Therapy by Curare, *J. A. M. A.*, Vol. 114, No. 4, p. 322, Jan. 27, 1940.

EMBOLIC PHENOMENON ASSOCIATED WITH BACTERIAL ENDO- CARDITIS

Robert C. Jeffries, M.D.

Atchison, Kansas

The diagnosis of subacute or chronic forms of endocarditis, are often most difficult. The reason, being in most instances due to absence of symptoms, and the fact that a cardiac murmur in fever is not proof of endocarditis. Again pyrexia, is so often found in relation to arthritis, or due to other causes. The general septicaemic and pyaemic symptoms, are very often made certain at a late date in the course of the disease. Thus, if the various types of endocarditis are to be recognized clinically, dependent upon predominate features, we have for consideration the all important physical signs and symptoms of EMBOLI.

The recognition of embolic phenomena as a sequelae to endocardiac disease is diligently sought for in those cases where an endocardial foci is known to be present, or the suspect of the same is great. However, in such an instance they lend confirmatory evidence, with out the necessity for settling the question. As a general thing, the symptoms and physical signs of emboli vary rapidly, and are referable to two classes. They may be first mechanical, or secondly suppurative in effect, and also may be single or multiple when manifested. The common sites for their location with resultant vascular occlusive effect may be comprehended with ease. Although one must examine for the transient, red, tender erythematous spots, (Osler's nodes) especially near the finger-tips repeatedly; it has been my experience to only find them present with rare occasion. The same I find to be true with regard to the "splinter hemorrhages" beneath the finger nail, the appearance of petechiae in the skin, being seen with somewhat greater frequency.

It is often difficult to be certain whether symptoms are septicaemic or embolic in origin, in particular when splenic enlargement, haematuria, or purpura occur. Purulent invasion of the tissues in the neighborhood of joints is a frequent occurrence in the streptococcal type. Such an incident is quite distinct from the petechiae, and to be distinguished again in time, are the infarction. One may thereby be reminded that although petechiae are often regarded as embolic in origin, there is no proof of this.

A perivascular reaction to an exotoxin in the capillary arterial bed is most plausible as an explanation, or perhaps representing an allergic phase. Lesions, which are perivascular in nature and which occur about the joints producing redness and pain with occasional effusion into the joint cavity, are of great clinical importance. These little episodes, that usually clear away in three or four days, may be the one crucial symptom offered in evidence for the final determining diagnosis. By the same token I am pleased to present two rather recent cases of subacute bacterial endocarditis, that from the clinical point of view well illustrate early embolic phenomena.

Mrs. P. Mc N. a white female, aged fifty-four years, was first seen in the home March 15, 1940. Her complaint, and the initial one, was severe lacerating pain located at the distal end of the clavicle just inferior and mesially to the left shoulder joint. The pain had occurred suddenly, was very sharp, and caused her acute distress. She had on the previous day not felt well, namely that of moderate lassitude; and upon questioning the patient was able to give account of a definite rigor, occurring some eight hours prior to her incident of pain. The temperature was found at this time to be 102 degrees, the pulse very rapid, but with no irregularity. Pallor of the skin was marked, with profuse sweating, the implication being that she was seriously ill. External heat was applied, and she was given a hypodermic of $\frac{1}{3}$ gr. pantopon immediately. As she desired not to enter the hospital, her subsequent care was carried out in the home. The following day there appeared a small swelling the size of an apricot at the site of the painful area. The skin was slightly reddened, and very tender to palpation. The supposition was, that this may be followed by suppuration, which however was not the case. Temperature and pulse records kept daily revealed that her course of hyperpyrexia showed variations from 103.5 to 99.5 degrees, with no abatement of her extremely fast pulse rate. The pulse remained very rapid during periods of temperature moderation as well.

The irritability of the heart associated with a rapid pulse might serve to arouse suspicion that there be a cardiac foci present, when one is pressed to explain such behavior in the presence of toxemia, during an acute illness. This patient although very uncomfortable from her pain, was not clinically septic, nor did she present symptoms of an early septicaemia. Not until during the fourth week of her illness, could

there be elicited through auscultation of the heart, the presence of a murmur.

However, once established the murmur became more easily audible and very coarse during the next two weeks. The white blood count has remained rather constant at 20,000 cells. The blood culture on two occasions, during the first month of the disease, was found to be negative. There being very little doubt but that a positive culture is in the offering at a later date, as her clinical course would indicate.

Here we have I believe, an interesting and as well a good illustration of a perivascular lesion which has appeared EARLY, in a case of clinical subacute bacterial endocarditis. The location of the lesion is to my mind unusual and of added interest. The only other factor helpful from a clinical consideration was a history of inflammatory rheumatism at sixteen years of age. The patient is still under treatment, and remains unimproved.

The second case reported by Dr. Winstan L. Anderson, M.D., of Atchison, equally well illustrates the cardinal importance of early embolic incidence. His notations upon admission of the patient to the hospital are significant. The essentials of the hospital record are given:

Mrs. C. C. a white female, was entered in the hospital for observation and study. Her temperature was 101 degrees, the pulse rate 120 per minute. She was moderately undernourished, and quite pale. The chief complaints were; painful joints, specifically both of the ankles, which were swollen. The duration of the joint disturbances had been present for a period of three months. During this interval she felt certain that her temperature had been elevated during the day, with frequent occurring chills and she complained of mild gingivitis. The physical examination is as follows:

The tonsils are present and a chronic tonsillar infection is noted. The anterior cervical glands are enlarged bilaterally, and are slightly tender. The heart is not enlarged, with a regular rhythm, and a soft systolic murmur is audible over the base. Pelvic examination is negative with the exception of a chronic endocervicitis. Both ankle joints are moderately swollen and tender. The tenderness and swelling would seem to be not wholly confined to the joint, but rather periarticular in nature.

The urine contained one plus albumin, the examination of the blood reveals a hemoglobin of sixty-one per cent; R.B.C. 3,944,000; W.B.C. 7,700 with a color index of 0.8. The differential count: Polymorphnuclear cells are sixty-five, monocytes five and lymphocytes twenty-one. Transitional cells of the granulocyte series number six. The blood culture taken on the following day after admission, was negative after seventy-two hours. An additional culture following the first, was also negative for bacterial growth. The patient was dismissed from the hospital after three days confinement. The diagnosis at this time was septicaemia with a chronic tonsillar infection. The exciting factor producing the septic nature of her illness was thought to be an endocardial bacteraemia.

September 15, 1939, some three months after her first period of hospitalization, the patient was readmitted for further treatment. Her complaint at this time was; acute pain in the lower right quadrant of

the abdomen, difficulty in breathing, and sweating with profound prostration. Examination demonstrated an area of dullness confined to the upper left lobe of the lung. For several days she had a moderately severe haematuria. Three days later she was removed to the St. Margarets hospital, Kansas City, Kansas. Death occurred in that institution, and the diagnosis at necropsy was subacute and chronic bacterial endocarditis.

In this single case, for over a span of five months, we see repeated embolic insults with a latent developing septicaemia. There were no petechiae or peripheral embolic symptoms early, with the possible exception of the swollen tender ankle joints. Later during the terminal phase of her disease there occurred multiple emboli. The blood culture on two occasions was reported as being negative. Repetition of the culture, I feel sure, would have at some time confirmed the clinical diagnosis.

COMMENT

The recording of these two cases would seem to indicate the general importance of:

1. Early occurring embolic incidence, either intra or extra articular in nature is most commonly seen in bacterial endocarditis.
2. That the sporadic showers of emboli may result only in transitory symptoms, or instigate the production of sustained pathological foci.
3. That there may be long intervals of time elapsing between the passing of one episode and the beginning of another.
4. That actual occlusive vascular effect with infarction may occur before any definite cardiac disorder is detectable.
5. That in any patient with a sustained temperature, remissive in kind, associated with a rapid irritable heart, should be held as being suspicious of an endocardial infection until proven otherwise.
6. In bacterial endocarditis the clinical diagnosis is of major importance, and frequently the only clue to the gravity of the disorder.

Accuracy of medical news increasing: "Only those closely associated with modern trends in publication are familiar with the vast improvement that has been taking place relative to the publication of news of scientific advances," The Journal of the American Medical Association for January 20 declares. "A bulletin recently issued by the United Press to its bureau managers and division managers is worthy of quotation. It reads:

"It seems advisable to restate our traditional policy concerning handling stories of 'cures' or other medical developments.

"Under no circumstances put any story on the leased wire about a remedy. If the bureau manager is convinced that the story has merit, he should overhead it to New York for investigation and consideration there."

LIPOID PNEUMONIA*

WITH REPORT OF A CASE

Robert M. Carr, M.D.

Junction City, Kansas

Lipoid pneumonia is a disease entity that can be said to result from treatment prescribed for the prevention, relief, or cure of certain other diseases.

It may be defined (Wolman¹²) as a low grade chronic reaction, local or generalized which results from the entrance of oily or fatty substances into the pulmonary alveoli. The consolidations are produced by tissue reactions to these foreign materials. The character and extent of the cellular reaction depends upon the chemical characteristics of the oily substance, its quantity, the quickness of introduction, and the age of the lesion.

The exact incidence of this condition is not known, but there is probably much more of it than is generally realized. To date approximately 212 cases have been reported in the literature. Its greatest incidence is in children under two years of age, but is also known to occur in older children and adults, especially those in a debilitated condition.

Lipoid pneumonia was first described by Laughlen⁶ of Toronto in 1925 who reported the case histories and autopsy findings of three children and one adult. Since then much clinical and experimental work has been done on it and fully reported by Pinkerton¹⁰, Goodwin², Pierson^{8,9}, Ikida⁴, Wolman¹² and others.

After Laughlen's discovery of his four cases, he was able experimentally to produce the same pulmonary condition in animals. His conclusions were as follows: "That oil finds its way into the alveoli of the lungs, not only when introduced directly into the trachea, but also at times when administered in sufficient quantities into the nose and throat. Oil when present in the lung is actively phagocytized by endothelial cells which are present in sufficient quantities to dispose of all oil present and produce consolidation of the lung."

The oils most commonly associated with this condition are liquid petrolatum or mineral oil, and animal oils, such as cod liver, milk fat and lard oil. Pinkerton¹⁰ demonstrated that lipoids of vegetable origin such as poppy seed, sesame and olive oil when introduced into the pulmonary alveoli produced very little reaction either cellular or humoral, and that they could remain in the lungs for a long period of time and were not digested. Furthermore this type of oil is easily removed from the lung by coughing,

expectoration and postural drainage. This of course explains the relative harmlessness of the commonly used iodized oils. With mineral oil, however, Pinkerton found very active phagocytosis, since it is not hydrolysed, and is more readily emulsified than other. These enormous numbers of oil filled phagocytes lead to consolidation of the involved portion of the lung and their prolonged presence stimulates a gradual thickening and fibrosis of the alveolar walls. The oil filled phagocytes enter the lymphatics and pass to the regional lymph nodes, which may become plugged and lead to disturbances of lymph circulation.

Animal oils, especially cod liver, milk fat, and lard oil readily undergo hydrolysis in the lung liberating fatty acids, which produce a marked pulmonary reaction characterized by an intense serous and cellular response, oftentimes associated with hemorrhage, and focal necrosis. The end result of this intense inflammatory reaction is fibrosis and contraction of the lung. That acute infectious pneumonia may be superimposed in lipoid pneumonia is known, and is due probably to the reduced resistance of the pulmonary tissue because of interference with ventilation, bronchial and lymph drainage. That infectious organisms from the naso pharynx may be carried into the lung by the oil is also probable (Klinck⁵.)

The gross pathologic appearance (Wolman¹²) of the lungs with lipoid cell pneumonia resembles that of acute broncho pneumonia with large and small areas of consolidation distributed thru air containing or edematous tissue. The lipoid containing areas are yellow or gray-white, and oil may exude from the cut surface. As before mentioned, animal oils may produce focal necrosis with abscess formation. The distribution of the lesions demonstrates their exogenous origin. The peri-hilar and dependant portions of the lobes are the most often affected and the right lung shows greater involvement than the left.

From a practical standpoint, this condition results most commonly from the use of oily nose drops in the treatment of upper respiratory infections. The mineral oil in the preparations is so bland that it can pass thru the naso pharynx into the trachea and oftentimes not even provoke a cough.

Equally important are the oils taken by mouth. Mineral oil given to an infant or small child to relieve constipation frequently causes choking and spitting at which time aspiration of some of the oil into the lung is probable. If this process is repeated often enough, large quantities of the material may be aspirated. The presence of general body debility, organic nervous system lesions, anomalies of the jaw or palate predispose.

*Read before the Golden Belt Medical Society, Junction City, April 4, 1940.

Marked resistance of a child to the taking of cod liver oil with gagging, spitting and choking can also result in aspiration. Regurgitation of milk and other fat containing foods with subsequent aspiration is still another source of danger especially since these substances are heavily loaded with bacteria. Mineral oil by mouth or via the nasopharynx, and cod liver oil are, however, the main etiological agents.

That this occurs most frequently in weakly debilitated children and adults is quite true, mainly because they are commonly kept in the reclining position, but it is by no means limited to that class of patients.

The symptoms of lipoid pneumonia are variable and there is no symptom complex that is pathognomonic of the condition. It should be strongly suspected in a weak, debilitated, marasmic infant or child, with a chronic brassy cough, a poor appetite, loss of weight or failure to gain, and recurrent attacks of what seems to be broncho pneumonia. If a definite history of medication with oil is obtainable, the possibility of lipoid pneumonia's being present is greater, and should provoke further investigation. Whether or not the patient is febrile depends on whether or not there has been secondary pulmonary infection.

The diagnosis is not always easy especially in the early course of the lesion. In reviewing the literature the statement "diagnosis was made at autopsy," appeared many times. As before mentioned it most commonly occurs in children under two years of age. It may occur in otherwise healthy children, but most commonly appears in those with such debilitated disorders, as rickets, prematurity, congenital syphilis, congenital heart disease, scurvy and eczema. Onset may be acute with fever and findings of broncho pneumonia, or have a more insidious beginning with loss of weight, retardation of growth, chronic deep and brassy cough, with recurrent bouts of fever until emaciation becomes extreme. Physical examination of the chest has not been found very satisfactory from a diagnostic standpoint, (Wolman¹²). Rales or impairment of the percussion note may at times be found, but as a rule no physical findings are present. This is due probably to the central position of the consolidation. The presence of oil filled macrophages in the sputum or stomach washings is of great significance, but is not found often enough to be of constant assistance.

The x-ray gives the most positive means of diagnosis, and yet there is no picture that can be considered entirely characteristic. From the roentgen standpoint three stages of the disease are recognized, mild, moderate and severe (Bromer¹).

The mild with exaggeration of the hilar markings: In the moderate, involvement greater there is greater

density of the perihilar shadows with widening in all directions. The dense shadows spread more or less homogeneously in all directions from the hilum but are always greater in the right lung.

In the severe cases, the perihilar shadows spread well out toward the peripheries of the lungs, although a clear area is usually present between the dense shadows and the chest walls. The oily deposit may extend to the pleura in which case the dense area extends to the chest wall.

The edges of the lesions are either thoroughly demarked or feathery.

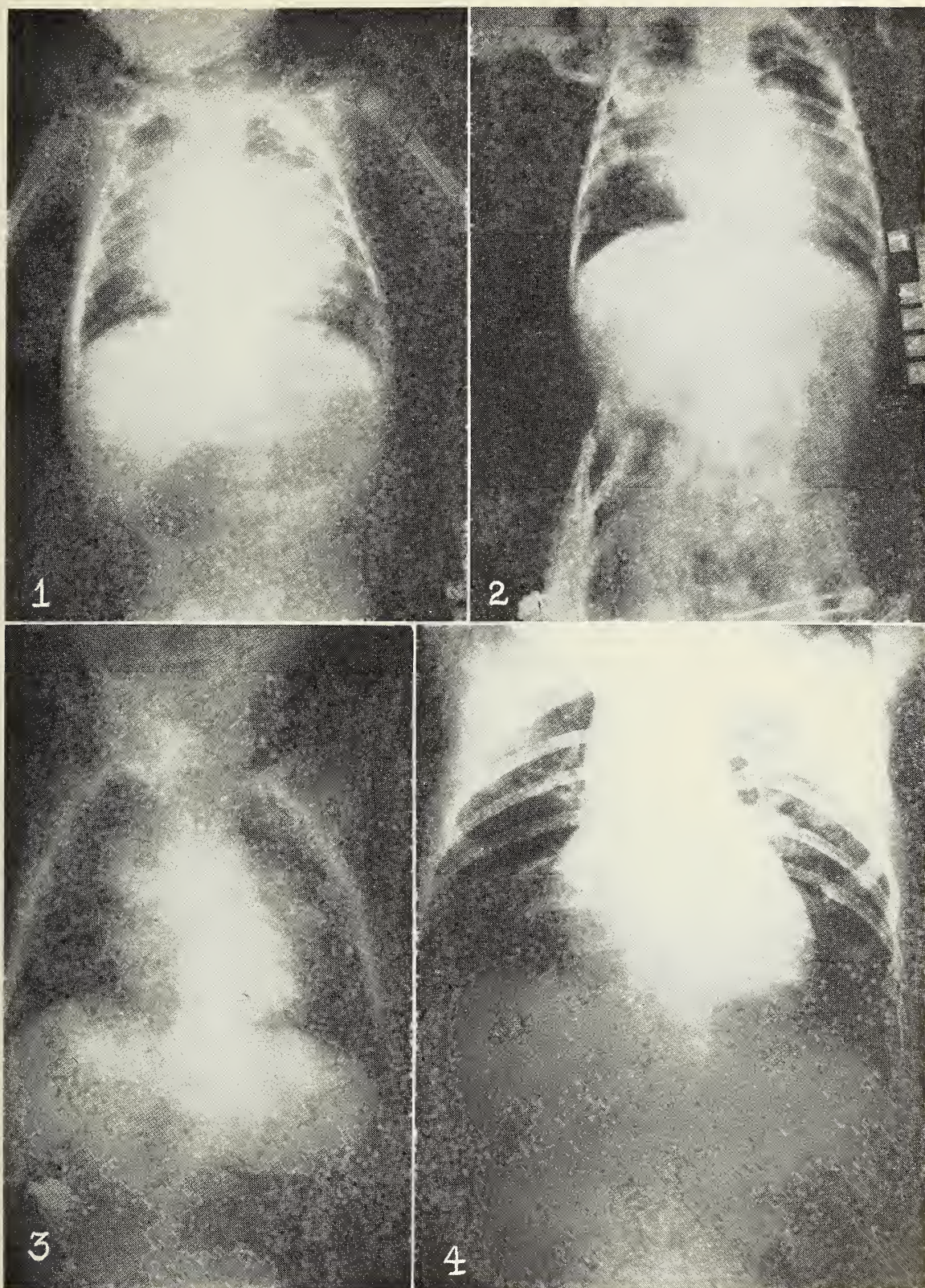
The most important thing is that serial pictures be taken over a fairly long period of time. Only occasionally is one picture diagnostic but a series of them may be. Serial pictures bring out the diagnostic fact that the shadows of involvement tend to remain the same size for months and in some cases for years, although some narrowing occurs with time. The clear area of the lung increases in size with growth of the child but the shadows decrease in size extremely slowly.

This condition must be differentiated from all other pulmonary conditions of a chronic nature. It must also be remembered that an acute broncho pneumonia may be superimposed with lipoid deposits as a predisposing factor. Tracheo bronchial tuberculosis can be ruled out with the tuberculin test. Lung abscess, lobular atelectasis, and bronchiectasis must also be considered.

As before mentioned a positive diagnosis depends on a history of oil aspiration and the finding of persistent infiltration of lipoid substances in the hilar regions.

Prognosis is reasonably good if the patient does not contract a secondary broncho pneumonia. It is obvious that a child with some congenital anomaly or constitutional disease has less chance for recovery than the otherwise healthy patient. Other things being normal, failure to gain, cough and anorexia fade away once the administration of the offending substance is discontinued. A less optimistic note is struck, however, by the fact that Monfort⁷, in 1939 reported nine cases, eight of which died.

Treatment, first must aim at prevention. Cod liver oil should be fed to a child only when awake and in the erect or semi-erect position. Vitamin concentrates are much to be preferred to the bulk cod liver oil, since they are not so apt to produce resistance with consequent choking and aspiration. The use of oily nose drops should be condemned. Substitution of aqueous solutions of ephedrine for oily ones, by ethical pharmaceutical houses, came as a result of this danger. Mineral oil for the treat-



Illustrations show reproductions of chest x-rays of a case of lipid pneumonia. (K.B. two and one-half months old.) Note persistence of perihilar opacity, with only gradual diminution

of extent and density of the lesion, from the acute state of the disease, to two months later, to one year later, and finally to two years later.

1. February 18, 1938.
2. April 11, 1938.

3. March 24, 1939.
4. March 20, 1940.

ment of constipation should be discontinued or used with extreme care in infants, weak debilitated patients, and neurologic cases. And finally, great care must be exercised with children prone to vomit or choke on their foods. If gavage feeding is necessary, it should be done by an expert.

The active treatment of the condition must first be the withdrawal of the offending substance, followed by such measures as will prevent the child from upper respiratory infections.

Supportive measures such as frequent feedings, of high caloric diet, vitamin concentrates and blood transfusions are of course very helpful.

Although this paper has dealt mainly with lipoid pneumonia as found in infants and children, it is by no means unknown in adults. Debilitated oldsters with neurological lesions are particularly prone to develop it if mineral oil is used to aid elimination.

The Sea View Hospital for Pulmonary Diseases¹¹ has added to its routine questionnaire for history taking the question—"Do you use oily nose drops, and how long have you used them?" They have found a large incidence of lipoid lung irritation in chronic sinusitis patients who use oily ephedrine preparations.

SUMMARY

Mineral oil and certain animal oils when introduced into the lungs in sufficient quantities cause pulmonary reactions of an acute, or chronic nature known as lipoid cell pneumonia.

Mineral oil is phagocytized and deposited in the pulmonary alveoli and peri-hilar lymphoid tissue. Cod liver, lard and milk fat oils are hydrolyzed into fatty acids in the lung, which result in an intense inflammatory reaction, leading to consolidation, fibrosis and contraction of the affected portion of the lung. Secondary infection is frequently superimposed with consequent broncho pneumonia.

The condition most frequently occurs in infants and children under two years of age as the result of prolonged use of oily nose drops, aspiration of mineral oil used for the treatment of constipation or aspiration of cod liver oil.

The condition is more easily prevented than cured. Oily nose drops should never be used. Aqueous solutions of ephedrine are available if needed. Mineral oil by mouth for the treatment of constipation should be used with great care. Cod liver oil concentrates are highly preferable to the bulk forms, since the concentrates do not provoke so much resistance with consequent gagging and aspiration.

CASE REPORTS

K. B. male infant two and one-half months old first seen February 6, 1938. The mother related the

following complaints; loss of weight, vomiting, fever, cough and no appetite.

The child's history was as follows: Normal birth, the third born of a mother of twenty-two years. Birth weight eight pounds. The attending doctor told the family that the baby was normal at birth, and it continued to do well until it was about three weeks old when it contracted an upper respiratory infection. From that time on until first seen by us he became worse, running an irregular fever with cough, vomiting persistent loss of weight and constipation.

Examination. A male infant two and one-half months old appearing acutely ill. The skin was loose and dehydrated and emaciation was marked. The child had a grunting respiration and occasionally a brassy cough which was accentuated when the child was turned on his right side. Rectal temperature 102 degrees, pulse rapid but regular, weight eight pounds three ounces, just three ounces over birth weight. The lungs were negative to physical examination except for a few scattered rales. Abdomen negative for palpable masses and neurological examination negative. The urine had a trace of albumin but was otherwise negative. Blood—red cells, 4-600,000, hemoglobin eighty-nine per cent, while cells 10,000 with normal differential. The blood Wasserman was negative. Tuberculin test with PPD number one was negative.

After this examination a tentative diagnosis was made of marasmus secondary to a feeding problem. The child was admitted to the hospital and placed on frequent feedings of high caloric formula with intramuscular thiamin chloride and saline subcutaneously. At this time it was noted that the child lay continually on its left side, so much so in fact that a marked flattening of the left rib cage had taken place along the anterior axillary line. Furthermore when the child was turned on the right side, shortness of breath with cyanosis and cough developed.

X-ray of the chest showed a dense opacity extending out from the hilum in both directions, but to a greater extent on the left. The edges of this opacity were feathery. A lateral view of the chest showed this opacity to be in the area of the posterior mediastinum. No diagnosis was made at that time.

In spite of the treatment the baby continued to vomit most of the food and the temperature remained around 103 to 104 degrees rectal. In addition a few days after admittance to the hospital, projectile vomiting occurred along with definite rigidity of the neck. A spinal puncture done at that time revealed a normal fluid under no increase in pressure and negative to laboratory examination.

Weight two weeks after institution of treatment was seven pounds fifteen ounces.

At this time the child was seen by a pediatrician and the chest plates by two roentgenologists whose conclusions were that this was probably an atelectasis. Carbon dioxide oxygen hyperventilation and blood transfusions were advised. Feeding was done by eye dropper and even at times by gavage in an effort to save the strength of the baby.

On about March 8, 1938, one month after admittance to the hospital the baby's temperature returned to normal but the general condition had become worse, the weight at that time being seven pounds thirteen ounces and cough and cyanosis much

more severe. The baby had been given four transfusions of citrated blood and hyperventilation had been continued at intervals until the cyanosis became so marked that this was considered no longer advisable. The x-ray examination of the chest showed no improvement.

Because of the apparent progressiveness of the child's condition and the feeling that I could do nothing more, the family were allowed to take the baby home, but were instructed to return at intervals of a week for a blood transfusion as this was apparently the only measure that showed any evidence of giving improvement. The mother continued feeding essentially as done in the hospital and much to my surprise the child began to show considerable improvement a week or two after returning home. Three transfusions of citrated blood were given at intervals after discharge from the hospital. Although weight stayed almost stationary at eight pounds for the succeeding three months the child was eating and retaining most of its food and the coughing and attacks of cyanosis became less frequent. Chest pictures taken at intervals showed very little improvement or regression in the size of the perihilar opacity. The deformity of the chest was greatly improved.

In August of 1938, seven months after institution of treatment the child's weight was nine and one-half pounds and since that time weight gain and general body development has been at a normal rate so that on March 20, 1940, the child weighed twenty-six pounds and seemed normal in all respects. The mother reports that when the child has a cold an unusually harsh cough occurs. A chest plate taken March 20, 1940, shows definite diminution in the size and density of the opacity but with a rather large amount of it still remaining in the left lung field.

In July, 1938, while in Boston the chest x-rays were seen by Dr. A. O. Hampton at the Massachusetts General Hospital and he made the diagnosis of lipid cell pneumonia. The mother was contacted as soon as possible and questioned concerning oil medication, and she said, "Oh yes, when the baby had the cold when three weeks old he became constipated and we gave him mineral oil. I believe we gave him a quart or more in a month."

In view of the history of oil medication, the clinical symptoms and progress and especially the x-ray findings, I present this case as one of lipid cell pneumonia. That the greatest concentration of oil in this case was in the left chest rather than the right is due to the fact that the mother kept the child lying on its left side.

BIBLIOGRAPHY

1. Bromer, R. E., and Wolman, I. J., Philadelphia. Lipoid Pneumonia in Infants and Children. *Jr. of Radiology*, Jan. 1939.
2. Goodwin, T. Campbell, Baltimore. Lipoid Cell Pneumonia. Reprinted from the *American Journal of Diseases of Children* August 1934, Vol. 48 pp 309-326.
3. Ikeda, Kano, St. Paul. Oil Aspiration Pneumonia. *Clinical, Pathological and Experimental Consideration*. *American Journal of Diseases of Children*, April 1935, Vol. 49, pp. 985-1006.
4. Ikeda, Kano, St. Paul. Lipoid Pneumonia of the Adult Type (Paraffinoma of the Lung) Reprinted from the *Archives of Path.* April 1937, Vol. 23, pp. 470-492.
5. Klinck, G. H., Jr. Lipoid Pneumonia. *Albany Medical Annals*, June 1936.
6. Laughlen, G. F. Pneumonia Following Nasopharyngeal Injections of Oils. *Am. Jr. Path.* 1, 407-414, July 1925.
7. Monfort, J. A. Lipoid Pneumonia—9 cases. *Medical Times*, New York, July 1939, Vol. 67, pp. 320-325.
8. Pierson, John W. Baltimore. Pneumonia Due to the Aspiration of Lipoids. *J.A.M.A.* Vol. 99, No. 14.
9. Pierson, John W. Some Unusual Pneumonias Associated with the Aspiration of Fats and Oils in the Lungs. *Am. Jr. Roentgenol.*

and *Rad. Ther.* April 1932, Vol. 27, pp. 572-579.

10. Pinkerton, Henry. Oils and Fats: Their Entrance Into and Fate in the Lungs of Infants and Children. A Clinical and Pathological Report. *Am. Jour. Dis. Child.*, 1927 Vol. 33, pp. 259-285.

11. Tchertkoff, I. C., and Ornstein, G. G.: Broncho Pulmonary Disease Attributed to the Use of Intranasal Instillation of Oily Substances. *Quart. Bull. Sea View Hospital*, 1936, Vol. 1, pp. 139-159.

12. Wolman, Irving J., Philadelphia. Lipoid Pneumonia in Infancy and Childhood. *Penn. Med. Jour.* February 1939.

"Within ten days more than 40,000 physicians returned their questionnaires to the headquarters office of the American Medical Association supplying information to be used in the campaign for medical preparedness," The *Journal of the American Medical Association* for July 27 reports in an editorial. "An especially augmented staff is already at work checking the replies and preparing punch cards which will be used in making the selection of men for functions in preparedness and functions in any national emergency which may develop.

"Every physician should return his questionnaire as soon as possible. Ultimately a punch card will be prepared for each physician in the United States, since it is necessary that every physician be represented in the file. If there is national conscription, physicians will be called as are other citizens of the United States. Great advantage to the physicians, to the Army and Navy Medical Departments, to the United States Public Health Service, and indeed to the country as a whole lies in the development of this material. With the full information once supplied, it will be possible to a considerable extent to fit every physician into work for which he is best suited.

"On July 19 the Committee on Medical Preparedness met in the headquarters office of the American Medical Association with representatives of the United States Army and Navy and Public Health Service. Plans were discussed for utilization of medical personnel. There begin to be indications of the many needs which must be filled in the future. Tremendous expansion of industries associated with the manufacture of munitions and military supplies will require numbers of industrial hygienists, physicians and surgeons far beyond the number now available. Examination of many thousands of men associated with the setting up of recruiting centers, training forces and for similar objectives will again require the services not only of physicians capable of conducting routine examinations but of specialists in every medical field. Particularly important are pathologists, clinical pathologists, roentgenologists (x-ray specialists) and experts in the field of cardiology (study of the heart), tuberculosis and nervous and mental diseases. Finally, it is absolutely necessary to assure continuity of medical service for the civilian population.

"Arrangements were made to utilize state and county societies in the extension of this work. If a physician fails to return his questionnaire, it will become necessary to ask his colleagues and his state and county medical society to be of service in determining why the physician failed to cooperate and insure the eventual return of the information.

"At a time when the nation may need the service of every patriotic citizen, the physician owes this obligation to the country and to himself. In a few instances cards and notes have been received from physicians indicating that their sympathies do not lie primarily with the needs of the country. It would be unfortunate indeed if any considerable number of physicians adopted such a point of view. The more promptly the questionnaires are returned, the greater will be the possibility of eventual action. The more accurately the information is supplied the more rapidly will it be codified. It is not only the medical profession that is on trial in this instance but democracy itself."

President's Page

To the Members of The Kansas Medical Society:

The medical preparedness campaign is getting under way. It is essential that all questionnaires sent to the physicians of our state from the American Medical Association office be completed and returned at once. It is to be hoped that the office of each county medical society will poll their membership to ascertain whether or not this part of our job has been completed. We must not fail to meet this obligation—get the job done in your county today.

Matters of social and political interest to all medical men must not be overlooked. From now on, until county, state, and national elections are over, it is essential that we concern ourselves with the idea of placing men in office who have demonstrated by word or deed their desire to preserve our American institutions, our American customs and our American way of life. We must not fail to meet this obligation. There are those among us who meet this obligation as a matter of daily routine from one year's end to the next. May we all appreciate the necessity of such action and put our shoulder to the wheel today.

Sincerely,

A handwritten signature in cursive script that reads "Loren L. Loveland M.D.".

President, The Kansas Medical Society.

EDITORIAL

FALL CLINICS

Each fall, the physicians of Kansas have unusual educational opportunities through the courtesy of our neighboring states, Missouri, Nebraska and Oklahoma. These opportunities are made possible through the efforts of the members of "The Kansas City Southwest Clinical Society," "The Omaha Midwest Clinical Society" and "The Oklahoma City Clinical Society" in fostering their respective annual clinical conferences.

The physicians of Kansas are cordially invited to attend all sessions of these clinics and the entertainment features that are offered. The geographical location of the clinics, one to the south, one to the east and one to the north, makes at least one clinical conference in easy driving distance of each of our members.

The Kansas City Southwest Clinical Society will hold its annual fall conference at the Municipal Auditorium on September 30, October 1, 2, and 3, 1940. The program as arranged has been kept free of ultra-scientific papers, all of the subjects being of prime importance to all physicians, be they general practitioners or specialists. The speakers include eighteen distinguished guests from the various medical centers of the United States and Canada. The addresses are arranged so that there is; one general assembly daily, round table luncheons daily, a panel discussion on anemia on Monday evening and a panel discussion on heart on Tuesday evening. The scientific exhibits promise to be very good and in addition there will be the usual technical exhibits.

This program and clinical conference is supported through the medium of active and associate membership dues. The associate memberships are available to all members of The Kansas Medical Society and the amount of the dues is five dollars per year. This membership not only gives one the privilege of attending the fall conference but also a subscription to "The Kansas City Medical Journal," which is published monthly and contains many articles of scientific interest as well as news pertaining to the Clinical Society.

The Omaha Midwest Clinical Society will hold its Eighth Annual Session October 28 to November 1, inclusive, in the Hotel Paxton, Omaha, Nebraska. The members of this Society, through conscientious planning and financial support, each fall produces this conference for the good of its members and the invited physicians. The registration fee for guests is five dollars.

The program is well balanced, intensive and concise and any physician attending can get a wealth of information of the newer methods of diagnosis and treatment as well as a review of the time tried methods, in the short period of five days. The guest speaker roster includes seventeen distinguished physicians, who are authorities in their various fields. The entire day, Friday, November first, has been set aside for a symposium on anemias.

The Tenth Annual Fall Clinical Conference of The Oklahoma City Clinical Society will be held at the Oklahoma Biltmore Hotel in Oklahoma City on October 28, 29, 30, and 31, 1940. Seventeen outstanding leaders of medicine and surgery will present their experiences and opinions on medical problems during the four days of this conference. There is a registration fee of ten dollars which covers all of the features at the clinics, including scheduled dinners, luncheons, postgraduate courses and the annual smoker.

The program is diversified and well balanced and is arranged primarily for the benefit of the general practitioner. The meeting is an intensive postgraduate course broken by well timed hours of pleasure.

For further information regarding the Conference of The Kansas City Southwest Clinical Society and the Oklahoma City Clinical Society, consult their advertisements in the advertisement section of this issue of the Journal.

The physicians of Kansas are grateful for the privilege of attending the fall conferences of the clinical societies of our neighboring cities. For those of you who have not attended the previous meetings of these societies, just talk to some of your medical friends who have. They are enthusiastic about the meetings and the way that they have been conducted, as well as the friendly spirit and wel-

come that prevails among the hosts. Plan now to attend one or more of the annual fall conferences of Kansas City, Omaha, or Oklahoma City.

BOOKS

The Society has during the past several years donated a considerable number of books to the stacks of the Stormont Medical Library, which is located in the State House in Topeka. Thirty-two books were placed there recently and approximately fifty additional ones will be placed in the library within the near future.

Books given by the Society consist mainly of those forwarded by publishers to the Journal for review. Books received in this manner are reviewed by members who are good enough to assist in that regard and reviews that they prepare are published in the Journal, from time to time.

During 1939 and 1940 review books were received from the following publishers: The Commonwealth Fund, 41 East Fifty-seventh Street, New York; America's Future, Inc., 205 East Forty-second Street, New York; P. Blackston Co., Philadelphia, Pa.; Harvest House, 70 Fifth Avenue, New York; Lea & Febiger, 600 Washington Square, Philadelphia, Pa.; J. B. Lippincott Co., Washington Square, Philadelphia, Pa.; C. V. Mosby Co., 3525 Pine Blvd., St. Louis, Mo.; Whittlesey House, New York; The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, Ill.; Little Brown & Company, 34 Beacon Street, Boston, Mass.; The McMillan Company, 60 Fifth Avenue, New York; F. A. Davis Co., Philadelphia, Pa.; Public Relations Bureau, Medical Society of the State of New York, 2 East 103rd Street, New York; Princeton University Press, Princeton, N. J.; W. B. Saunders Co., Philadelphia, Pa.; Harcourt, Brace & Co., 383 Madison Avenue, New York; The Greystone Press, 40 East Forty-ninth Street, New York; Duke University Press, Morning-side Heights, New York; M. Barrows & Co., 286 Fifth Avenue, New York.

The Editorial Board wishes to thank the publishing houses who have been good enough to furnish

the Journal with such a splendid class of medical material and the Journal also appreciates the excellent assistance numerous members have provided in the reviews.

H. J. Bigelow said of Oliver Wendell Holmes, "he could get what he wanted out of a book as dexterously, as neatly, as a rodent will get meat out of its shell." A doctor should remain a student all of his days, utilizing libraries to help in carrying on his postgraduate education.

The Journal is also at the present time receiving some 115 exchange Journals from all parts of the world. The most distant points from which journals are received are: Argentine; London; Japan; Calcutta, India; Banga, Punjab, India; Hawaii; Ghent, Belgium, and Manila, P. I. This month the Journal received the entire yearly publication for 1939 of the Bulletin of Biology and Medicine of Moscow, U.S.S.R., with a request for an exchange.

THE RAMPARTS WE WATCH

The business of preparing for the defense of the nation goes steadily on. Medicine has a quietly important part in these preparations and it is reassuring that the American Medical Association and the state

medical societies have a leading position in mobilizing the medical forces. Aging veterans of 1917 wistfully hope that some of the outworn conceptions and traditions of the "Old Army" will not confuse things quite so much this time and that first things will come first. Perhaps it will be realized that a competent civilian surgeon can be a valuable man around the operating room in a base hospital, or even in a mobile unit in the zone of the advance without having to spend weeks learning how to steer an ancient calvary mount across the plains of Kansas. Maybe pathologists may go their way about their laboratories unhampered by boots and spurs, and x-ray people left to their tasks with no knowledge of how to keep house in a pup tent. Come what may in this adventure, horses in Kansas, boots and spurs in New York and pup tents in Georgia, Connecticut will do her part.—The Connecticut State Medical Journal, September, 1940.

If you have not completed your medical preparedness questionnaire, please do so immediately and forward it to the American Medical Association.

If you have not received a copy of the questionnaire, the central office of the Society will furnish you one.

CANCER CONTROL

TUMORS OF THE SALIVARY GLANDS

Cecil D. Snyder, M.D.

Winfield, Kansas

There are three kinds of epithelial tumors which commonly involve the salivary glands, namely:

1. The benign adenoma.
2. Malignant adeno-carcinoma (which I shall discuss and call cancer).
3. Mixed tumors.

Ninety per cent of tumors of the salivary glands involve the parotid glands. The submaxillary gland is rarely involved. The involvement of the sublingual gland is extremely rare. A tumor of any of these glands may be the result of calculus in the duct or any of the contributory ducts by which these glands drain. These tumors will not be discussed.

It is interesting to note that the nasopharynx or soft palate may be the primary site of growth. In addition the oral cavity may be involved, the tumor appearing about the orifices of the salivary ducts or within the substance of the lip, the base of the tongue, or the cheek.

Benign adenoma of the salivary glands is rare and slow growing, the only danger being that there is a possibility of it becoming cancerous; particularly those occurring about the nose and upper lip. These tumors are usually firm and smooth, though they may become cystic. At times their size causes an unsightly appearance, and in addition, pressure symptoms may result in facial paralysis, due to the involvement of the facial nerve.

True, cancer of the salivary glands is by no means rare; neither is the occurrence of mixed tumors. In the oral cavity malignant tumors most often occur as hard, irregular, elastic masses, situated either around the orifices of the salivary ducts, within the substance of the lip, the base of the tongue, or the cheek. These tumors commonly appear to be opaque. The nasopharynx and soft palate are often the primary site of growth. The mass develops rapidly; at first it is encapsulated, but very soon invades the surrounding tissue. Or, in case it is located in the parotid gland, it involves the whole gland, capsule, and regional lymph nodes. Bone metastasis in the case of this gland growth is common and early. Symptoms are usually produced by the size of the tumor and the pressure resulting

therefrom. Those tumors occurring near a bone are usually accompanied by much pain.

Mixed tumors of the parotid gland are frequently encountered. The origin of these tumors is a matter of discussion. According to present concept these tumors may be of epithelial or endothelial origin, or may be the result of embryonic rests present in the gland. Mixed tumors are characterized by a tendency to local recurrence. It is important to note that if the tumor is inadequately removed, the recurrences are very apt to become malignant. Also, mixed tumors may remain benign for years and then become malignant. Facial nerve paralysis is suggestive of malignant change.

Complete extirpation of these tumors is oftentimes very difficult because of their location, as the majority of these tumors occur in the parotid gland and very frequently surround the facial nerve. Extreme care must be observed in their removal to prevent damage to the facial nerve.

Following the removal of these tumors, salivary fistula is the usual thing, lasting from one to two weeks. Pre- and post-operative x-ray in the handling of these tumors may be advisable. It is well to remember, if the tumor is malignant, it is cured only by complete extirpation early, before metastasis has taken place. If the tumor has not been completely removed, irradiation, pre- and post-operative, may delay its recurrence, but will not effect a cure in the case of carcinoma.

Differential diagnosis of benign and malignant tumors is often difficult.

Benign tumors shrink rapidly after irradiation, while malignant tumors are rarely benefited by x-ray. However, the capsule becomes markedly more tough following irradiation, making surgical removal easier, even in the case of cancer of the gland. Pre-operative x-ray is oftentimes a valuable diagnostic procedure. Accurate diagnosis of the tumor involved, however, is made only by microscopic examination, after removal of the tumor.

The prognosis of carcinoma of the salivary glands is only fair. Metastasis is early and recurrence following removal is common. Early recognition of these tumors with complete removal offers the best hope of permanent cure.

The treatment of all tumors of the salivary glands, except the hopeless advanced malignancies, is complete extirpation. In malignant tumors the entire gland and its cervical lymphatics must be removed.

Patients should be warned of the danger and possibility of facial paralysis following operation. Frequently there will be a facial paralysis for a period of anywhere from four weeks to three months, due to swelling in the facial nerve, even though the nerve has not been cut during the pro-

cedure. Here, as elsewhere, early recognition is an all-important factor. Complete extirpation of the tumor early will effect a cure.

BIBLIOGRAPHY

1. Ewing, *Neo-Plastic Diseases*, Third Edition, pp. 768-770.
2. Hertzler, *Treatment of Tumors*, pp. 345-353.
3. Cutler and Busche, *Cancer—Its Diagnosis and Treatment*, pp. 193-199.
4. Pagett, *Surgical Diseases of Mouth and Jaw*, pp. 518-523, 545-546.

TUBERCULOSIS CONTROL

EXERCISE IN TUBERCULOSIS*

William J. Habeeb, M.D.

There is still a wide divergence of opinion among tuberculosis physicians concerning exercise in the treatment of tuberculosis. Aside from the judgment of the physician, the time to start exercise and the amount to be taken are dictated by the physical makeup of the sanatorium and by the size of the nursing staff. For example, in the cottage type of sanatorium, patients get more exercise going to meals than in a sanatorium built entirely under one roof; and where there is a shortage of nurses the patients do more for themselves.

Tuberculosis specialists differ in their views as to what constitutes exercise. Those who believe in strict bed rest will consider every activity of the patient short of resting quietly in bed as exercise. Sitting up in bed, writing letters, drawing, knitting and so on are exercise by that standard. Others hold that only such activities carried on after the patient is clothed and ready for outdoor walks, merit the term exercise. The majority steer a middle course between those two extreme views.

Patients do not react alike to the same amount of exercise; mild exercise for one patient may be strenuous exercise for another even though the patients have a comparable disease. In general, any activity which produces severe fatigue should be halted, for fatigue is a symptom of overstrain.

Exercise should be prescribed and graduated according to the individual need of the patient. Malaise, fever, rapid pulse and marked fatigue are constitutional symptoms indicating a toxic systemic reaction, and any patient with these symptoms should be in bed. Regardless of the x-ray, the sedimentation rate or the sputum contents, constitutional symptoms must be treated by strict bed rest. To treat every patient regardless of symptoms, or lack of symptoms, with strict bed rest is extreme.

Apparently comparable cases of tuberculosis,

which have practically the same amount of disease by x-ray, seldom have the same symptoms to the same degree. One must distinguish between local and constitutional symptoms in tuberculosis just as one must distinguish between local and constitutional symptoms if one treats a boil. A boil produces pain, swelling, redness and local heat and can be treated as a local affair, usually. But if the patient develops malaise, fever, and loss of appetite the boil ceases to be a local affection and the constitutional symptoms demand the patient be put to bed and adequate systemic measures be used. The same holds true in tuberculosis even though many sanatoria have lost sight of such a fact. Local symptoms and constitutional symptoms have a far different meaning, and any patient with constitutional symptoms should be on fairly strict bed rest until all constitutional signs and symptoms subside and the disease becomes stabilized. After that he may be allowed a graduated amount of exercise if other signs are favorable.

Patients with minimal disease and positive sputum whether they have cough or not should be in bed also. There are a few patients who raise positive sputum without coughing. They believe that the sputum raised is not sputum in the true sense unless they cough it up and many must be coached in order to produce a specimen of sputum for examination without undergoing gastric lavage. Exercise in such patients should not be permitted until a sufficient period of bed rest or a collapse measure in addition to bed rest has converted the sputum and given the disease time to become stabilized.

No patient with active tuberculosis regardless of the stage of the disease or the presence or absence of symptoms should be allowed to indulge in any activity to the point of fatigue.

In most sanatoria the amount of exercise is regulated but when the patient leaves exercise cannot well be controlled. Especially in those instances where the economic status requires the patient to work, a rehabilitation program covering a period of months is absolutely necessary. Arrested tuberculosis is not healed nor cured tuberculosis, yet patients are discharged from sanatoria as arrested cases whose only alternative is to go to work in order to support themselves. The greatest necessity in the field of tuberculosis at the present time is a rehabilitation program.

A few chest specialists allow their patients an amount of exercise almost equivalent to the regimen of one on vacation. Such physicians seem to feel that the mental state of the patient is so important in the healing of tuberculosis that a great deal of activity is justifiable in order to keep the patient from becoming introspective. The relationship between a patient's immunological reaction to disease

and his introspectiveness has never been proved and has no factual basis. Rest will heal tuberculosis. A healthy mental outlook without physical rest is not sufficient for the healing of tuberculosis.

Another theory of the exercise extremists is a fatalistic one which also calls on biological immunity and resistance for support but here again the facts do not support the theory. The extremists justify the exercise in the mistaken belief that a patient with average resistance will heal his tuberculosis even on exercise while no amount of bed rest will cure a patient who doesn't have average resistance. The idea is truly fatalistic. Conservatism in exercise is necessary for a favorable result in the majority of cases of tuberculosis. Rest is the greatest single factor in the healing of tuberculosis exclusive of collapse measures.

The general use of collapse measures such as pneumothorax has changed the course of the disease in thousands of cases. Too often the patient is put back on his feet immediately because of the improvement following collapse. In some clinics patients are not even put on bed rest during the pneumothorax induction period. But an immediate satisfactory collapse does not mean that the disease is healing—collapsed disease is not healed disease. Spreads do occur in well collapsed lungs, empyema frequently occurs and new disease often appears in the contralateral lung. Patients with well collapsed fresh disease should not be allowed exercise immediately no matter how well they look or feel. Collapse measures are not a substitute for bed rest. A well regulated rehabilitation program will prevent relapse in many cases.

*From: Tuberculosis Abstracts, September, 1940. Exercise in Tuberculosis, A Plea for Conservatism, by William J. Habeeb, M.D., Ohio State Med. Jour., Vol. 36, No. 6, June, 1940.

NEWS NOTES

If you have not completed your medical preparedness questionnaire, please do so immediately and forward it to the American Medical Association.

If you have not received a copy of the questionnaire, the central office of the Society will furnish you one.

POLIOMYELITIS

The Kansas State Board of Health forwarded the following communication on September 3 to all county health officers:

Dear Doctor:

Under date of September 2nd, a telegram was sent to your address, as follows:

"Recommend public and parochial schools not be opened pending developments in the poliomyelitis situation over the state."

Every county and city health officer knows his local situation and should govern himself accordingly. Owing to the fact that the Kansas statutes require that children attend school, it is our opinion that there are no monetary or educational reasons that would justify those in authority in taking any avoidable risks.

Our advice to parents has been that all children should avoid contacts with persons outside the immediate family. It has been proven, over and over, that this precaution will prevent the occurrence of cases. As far as public gatherings, picture shows, etc., there is no law that compels anybody to attend these places. If children attend with the consent of parents, they, alone, are responsible if their children contract poliomyelitis.

If, in your best judgment, the local conditions in your county do not warrant the following of the procedures recommended in our telegram, you are at liberty to take whatever steps you deem practical.

We enclose the comparisons, week by week, of the 1930 and 1940 cases.

If new cases develop in your jurisdiction, notify us by telegraph—collect.

Yours very truly,

F. P. Helm, M.D.,

Secretary and Executive Officer.

Following a special meeting of the Board held in Topeka on September 9 to discuss the poliomyelitis epidemic, another communication was sent to the county health officers, the county superintendents and the secretaries of the county medical societies:

A motion was made, seconded and carried, that "The Kansas State Board of Health recognizes that the infantile paralysis problem is so vastly different in various counties of the state that no set rule can be formulated to fairly govern or rule the entire problem of the state; therefore, it is resolved that each county health officer of the state in conjunction with the medical men and the school authorities, should decide the problem of whether or not to close the schools in each individual community. In the event there is disagreement, or there is need of additional information, the State Board of Health will send a representative to each county to assist in solving the problem. Be it further recommended that in communities where a decision is made to keep schools closed, that a request be made that all children under fifteen years of age not attend public gatherings.

As of September 13, 287 cases of poliomyelitis had been reported in the state.

STATE MEETING COMMITTEES

The Shawnee County Medical Society has announced the following committees which will have charge of arrangements for the 82nd Annual Meeting to be held in Topeka on May 12-15, 1941: Dr. J. L. Lattimore and Dr. L. L. Saylor, Co-general Chairman. Dr. W. H. Weidling, General Treasurer.

Program: Dr. O. R. Clark, Chairman, Dr. L. R. Pyle, Dr. D. C. Wakeman, Dr. B. I. Krehbiel, Dr. B. J. Ashley, Dr. H. L. Kirkpatrick.

Scientific Exhibits: Dr. B. B. Trees, Chairman, Dr. A. K. Owen, Dr. P. E. Belknap, Dr. R. B. Stewart.

Commercial Exhibits: Dr. L. A. Smith, Dr. M. E. Pusitz, Dr. S. H. Boyd, Dr. G. F. Helwig.

Golf and Trap: Dr. E. H. Decker, Chairman, Dr. R. P. Knight, Dr. H. W. Powers, Dr. F. C. Boggs, Dr. R. J. Miller, Dr. H. J. Davis.

Banquet-Entertainment: Dr. H. L. Kirkpatrick, Chairman, Dr. G. L. Kerley, Dr. F. L. Ford, Dr. H. H. Woods, Dr. H. B. Talbot.

Accommodations: Dr. L. E. Eckles, Chairman, Dr. C. K. Schaffer, Dr. F. P. Helm, Dr. E. J. Rose.

Arrangements: Dr. Guy Finney, Chairman, Dr. F. C. Taggart, Dr. J. D. Bowen, Dr. H. T. Morris, Dr. A. J. Brier.

Publicity: Dr. H. L. Clark, Chairman, Dr. P. M. Powell, Dr. W. W. Reed.

Ladies' Entertainment: Shawnee County Auxiliary.

CONFERENCE OF SECRETARIES POSTPONED

The Board of Trustees of the American Medical Association has decided that the Annual Conference of Secretaries of Constituent State Medical Associations will not be held this year.

Major reason given for the postponement of the meeting is the tremendous volume of work which has been undertaken by the Association in connection with the Medical Preparedness Program and the belief that all available time will be required for this purpose during the remainder of the year. It is believed that the usual meeting will be held in 1941.

NEW A. M. A. DIRECTORY

The Society office recently received the new sixteenth edition of the American Medical Association directory. It is interesting to note an increase of 6,188 physicians throughout the country. Death has removed 7,586 and there is an addition of 13,798 names. New York has the largest increase, with 1,783 physicians listed and in the Southern States there is a noticeable decrease in numbers. The division of the directory for Kansas listed 2,117 physicians in 1938 and in 1940 there are 2,070. The 1938 record gives Kansas the number of hospitals, sanatoriums and related institutions as 117 and in 1940 this number is increased to 120.

SCIENTIFIC EXHIBITS

Those desiring to exhibit material of scientific interest at the eight-second meeting of the Kansas Medical Society in Topeka, please write Dr. Clyde Trees, chairman of the Scientific Exhibits Committee, at 706 Mills Building, Topeka, Kansas, before November 1.

COMMITTEES

A meeting of all Society committee chairmen will be held during October to discuss the plans and projects each will sponsor during the present year.

The Committee on Conservation of Eye Sight, the Committee on Control of Cancer, and the Committee on Child Welfare have held recent meetings.

The Committee on Locations recently forwarded a bulletin to various intern and resident centers advising that Kansas has a few available locations and that it will assist physicians desiring locations in all ways possible.

The Committee on Study of Heart Disease and the Committee on Child Welfare are planning state-wide post-graduate courses which will be held in the near future. The Committee on Maternal Welfare has recently completed a brochure on that subject which will be published soon and made available to all physicians. The Committee on Control of Cancer has furnished to the Kansas Womens Field Army an article on cancer quacks which is to be distributed throughout the state. The other Society committees are making plans to renew their work following the inactivity during the summer.

MEETING

Dr. F. L. Loveland, of Topeka, the Kansas chairman of medical preparedness, will attend a meeting on that subject, which is to be held at the headquarters of the American Medical Association in Chicago, on September 20-21. The members of the A.M.A. Committee on Medical Preparedness, officials of the War Department and other agencies and the state medical preparedness chairmen will attend.

ADVERTISING

The National Physicians Committee for the Extension of Medical Service has prepared mats of the advertisements pertaining to socialized medicine, recently published in the Saturday Evening Post. The mats which are suitable for newspaper use will be given to any interested county medical society, pharmacists or other sources who desire to sponsor the advertising. The advertisements have appeared in newspapers in various parts of the country.

RE-REGISTRATION

Under the annual re-registration law, all Kansas doctors of medicine must re-register their licenses by October 1 of each year. The Kansas Board of Medical Registration and Examination forwards notice blanks to each physician and a remittance of \$1.00 should be returned to Dr. J. F. Hassig, 804 Huron Bldg., Kansas City, Kansas.

COUNCIL MEETING

Dr. F. L. Loveland has called a meeting of the council which will be held in Topeka on Sunday, September 22, commencing at 2:00 p.m.

Matters pertaining to medical preparedness and other subjects in which the organization is interested will be discussed.

COUNTY SOCIETIES

The Butler-Greenwood County Medical Society held a meeting in El Dorado on September 13 at the Susan B. Allen Hospital.

The Central Kansas Medical Society held a meeting September 12 in Ellsworth. Dr. James S. Hibbard of Wichita, spoke on "Diagnosis and Treatment of Acute Head Injuries"; Dr. Vincent L. Scott of Wichita spoke on "Convulsions in Infancy and Childhood" and Dr. Wirt Warren of Wichita spoke on "Practical Aspects and Differential Diagnosis of Hyperthyroidism."

The Douglas County Medical held a meeting in Lawrence on September 3.

Companion Volumes
Offering New and Complete Information on
CARDIAC and VASCULAR DISEASES
in



Clinical
Electrocardiography

By DAVID SCHERF and LINN J. BOYD

370 pages, 207 illustrations.

Price, \$6.25.

Dealing exhaustively with electrocardiography, both clinical and experimental, this book demonstrates its great practical importance while indicating the limitations of graphic methods. By incorporating clinical and therapeutic aspects of heart disease the authors emphasize the relations between electrocardiography and the clinic. The physician is thereby able to understand and make full use of the tracings provided for him, and they will thus find their proper place in the complete clinical picture.

The book is noteworthy in that it contains descriptions of the rare as well as the common disturbances, with full discussions of their mechanism. Further research is bound to be stimulated by the consideration of controversial points, here raised for the first time in an English text.

There are 207 instructive figures, mostly tracings, illustrating the cases considered, and extensive bibliographies are given after each chapter, covering the literature of various countries.

Cardiovascular
Diseases

By DAVID SCHERF and LINN J. BOYD

428 pages.

Price, \$6.25.

This book presents concise discussions of the most important diagnostic and therapeutic problems in the field of cardiovascular diseases. The information is practical and can be applied directly to diagnosis and treatment without recourse to complicated methods and apparatus. Emphasis is placed upon the most common and practical problems.

An outstanding feature of Scherf & Boyd's "Cardiovascular Diseases" is the amount of space devoted to therapy. Four chapters, embracing 60 pages, are devoted to treatment—the type of treatment that is sound and practical—the kind of therapy that gets results. Treatment, moreover, is featured throughout the book. For each condition discussed, the best approved methods of treatment are discussed along with the diagnosis and prognosis. Particular attention is paid to Digitalis Therapy in the special section on treatment. The discussion is full and interesting—with definite dosage indicated for certain types of cardiac failure.

"Clinical Electrocardiography" and "Cardiovascular Diseases" belong in your library. Send for them today!

THE C. V. MOSBY COMPANY

3525 Pine Blvd., St. Louis, Mo.

KMJ 9-40

Gentlemen: Send me () Scherf & Boyd's "Clinical Electrocardiography" priced at \$6.25.

() Scherf & Boyd's "Cardiovascular Diseases" priced at \$6.25.

Dr. _____

Address _____

The Ford County Medical Society held a business meeting on September 13 in Dodge City.

The Leavenworth County Medical Society held a meeting on September 9. Dr. F. L. Loveland, president, of Topeka, was the guest speaker.

The Pratt County Medical Society will hold a meeting on September 27 in Pratt. Dr. F. L. Loveland of Topeka will be the speaker.

The Sedgwick County Medical Society will hold their fourteenth annual golf tournament at the Crestview Country Club in Wichita on September 20. There will be skeet, trap, pistol and rifle shoots for the members who do not care to play golf.

The Shawnee County Medical Society held its annual social meeting on September 5 at the Shawnee Country Club in Topeka with golf and bridge for entertainment followed by a dinner.

The Washington County Medical Society held a meeting on September 10 in Washington. Dr. John Porter of Concordia and Dr. F. R. Croson of Clay Center were guests.

The Wyandotte County Medical Society held a meeting on September 10 in Kansas City. Speakers were: Dr. Donald N. Medearis of Kansas City, who spoke on "History of Pediatrics"; Dr. John A. Billingsley, of Kansas City, who spoke on "Trachoma," with the discussion by Dr. C. J. Mullen, of Kansas City; and Dr. L. B. Gloyne, of Kansas City, who presented colored movies of army maneuvers.

The Emporia Gazette recently published a story by Mr. Wm. Humphreys on the installation of new equipment at the St. Mary's Hospital of Emporia. The hospital has been accredited by the American Hospital Association and it has been announced that it will receive American College of Surgeons, approved in October.

MEMBERS

The American College of Chest Physicians recently announced the certification of Dr. A. L. Ashmore of Wichita.

Dr. S. L. Stout, former superintendent of the county hospital in Wichita, has opened an office for private practice in that city.

Dr. Wendell A. Grosjean, formerly of Colby, will be associated with the Snyder-Jones Clinic in Winfield, it is announced. Dr. Grosjean has been engaged in post-graduate work at the University of Kansas Hospitals for the past year.

An article by Dr. C. A. Hellwig of Wichita entitled "Routine Micro-filming of Tumor Slides" was published in the August issue of the Technical Bulletin of the Registry of Medical Technologists.

The article "Clinical Illustration of Acid-Base Imbalance" by Dr. Frank C. Neff, of Kansas City, Missouri, which was published in the May issue of the Journal was abstracted in the August issue of the International Medical Digest.

Dr. G. R. Peters of Kansas City has announced he will establish an office in Cameron, Missouri.

Dr. Paul T. Petit of Goodland has moved to Kansas City where he will take a year of post-graduate work.

Dr. John W. Turner of Wichita has been named as an assistant Sedgwick County Health officer.

DEATH NOTICES

Dr. Charles E. Ressler, 70 years of age, died July 16 at his home in Anthony, of arterial hypertension and general arteriosclerosis. Dr. Ressler was graduated from the Hahnemann Medical College in Chicago in 1896. He was a member of the Harper County Medical Society.

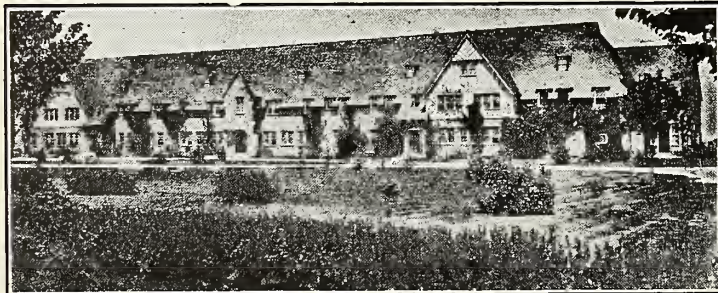
DEPENDABLE PRODUCTS *for* PHYSICIANS

Pharmaceuticals, Tablets, Lozenges,
Ampoules, Capsules, Ointments, etc.
Guaranteed reliable potency. Our
products are laboratory controlled.

Zemmer

Write for General Price List
Chemists to the Medical Profession
THE ZEMMER COMPANY
Oakland Station, Pittsburg, Pa.
KA9-40

WOODCROFT HOSPITAL



PUEBLO, COLORADO

Founded 1896 by Dr. Hubert Work

A modern, newly constructed
sanitarium for the scientific
care and treatment of those
nervously and mentally ill, the
senile and drug addicts.

CRUM EPLER, M.D.
Superintendent

“CONGESTION DUE TO
SMOKING RETURNED
WITHIN ONE WEEK
in 80% of the cases, on chang-
ing back to cigarettes made
by the ordinary method!”

The information quoted is from tests reported in *Laryngoscope**. While Philip Morris do not claim to cure irritation, here is what the tests revealed: *When smokers with irritation of the nose and throat due to smoking changed to Philip Morris, irritation cleared completely or measurably improved.*

On changing back, congestion returned in 80% of the cases.

PHILIP MORRIS & CO., LTD., INC., 119 FIFTH AVENUE, NEW YORK

*Feb. 1935, Vol. XLV, No. 2, 149-154

Dr. Howard L. Snyder, 61 years of age, died August 16 in Winfield. Dr. Snyder was born October 10, 1878, in Woodford County, Illinois. He attended Southwestern College in Winfield and was graduated from the Jefferson Medical College of Philadelphia in 1904, after which time he came to Winfield. Dr. Snyder was a past-president of



The Kansas Medical Society, and at the time of his death was a member of the Board of Governors of the American College of Surgeons, Kansas representative to American Society Control of Cancer, a delegate to the American Medical Association, a member of the Kansas State Board of Regents, and a member of the Cowley County Medical Society.

KANSAS MEDICAL ASSISTANTS

Our goal is 500 members by May, 1941. If your local group has not organized why not do so this fall. However, local membership is not necessary to affiliate with the state organization. A letter from your physician stating you have been employed one year or longer together with fifty cents state dues is all that is necessary to forward to the State Secretary—Ruth Alton, Union National Building, Wichita. Upon receipt of this information your membership card will be forwarded to you.

Margaret MacKenzie, President.

ANNOUNCEMENTS

Announcement has been received from H. C. Gibner, Colonel of the Medical Corps, Seventh Corps Area of Omaha that full-time physicians are needed for the medical service of the Civilian Conservation Corps. The initial salary is \$3,200 per annum. There are, however, no quarters provided for families of the physician and the physician is required to pay for his own maintenance. The principal duties at the camps consists of the medical care of the enrollees. To be eligible for this service, a physician must be a citizen of the United States, a graduate of an accredited medical school authorized to confer the degree of doctor of medicine, licensed to practice medicine, and physically able to perform the duties involved. Physicians over sixty years of age are not ordinarily employed.

Physicians interested in this service are requested to submit their applications to the Office of the Surgeon, Headquarters Seventh Corps Area, Federal Building, Omaha, Nebraska, giving the date on which their services would be available and their preference of assignment in the following states: Minnesota, North Dakota, South Dakota, Iowa, Nebraska, Missouri, Kansas, and Arkansas.

THE TROWBRIDGE TRAINING SCHOOL

Established 1917

A HOME SCHOOL for NERVOUS and BACKWARD CHILDREN

The Best in the West

Beautiful Buildings and Spacious Grounds. Equipment Unexcelled. Experienced Teachers. Personal Supervision given each Pupil. Resident Physician. Enrollment Limited. Endorsed by Physicians and Educators. Pamphlet upon Request.

1850 Bryant Building

E. HAYDEN TROWBRIDGE, M.D.

Kansas City, Mo.



NEUROLOGICAL HOSPITAL

Twenty-Seventh and The Paseo
Kansas City, Missouri

Modern Hospitalization of
Nervous and Mental Ill-
nesses, Alcoholism and
Drug Addiction.

THE ROBINSON CLINIC

G. WILSE ROBINSON, M.D.

G. WILSE ROBINSON, JR., M.D.

Karo is Ideal for Infant Feeding

37 % Dextrins

KARO dextrins are non-fermentable and non-irritating even in highly concentrated solutions because of their low osmotic pressure.

18 % Maltose

KARO maltose is rapidly converted into dextrose requiring no digestion, hence fermentation is rare indeed.

12 % Dextrose

KARO dextrose requires no enzyme activity for digestion, is well tolerated and immediately absorbable without irritation of the intestinal tract.

4 % Sucrose

KARO is flavored with a little sucrose but this small amount is completely digested to monosaccharides.



IN HIGH CALORIC DIETS

your patients will appreciate knowing the many ways in which Karo can be served. We will send to physicians copies of "49 Delightful Ways to Enjoy Karo"—please specify the quantity you require... Address

CORN PRODUCTS SALES COMPANY
17 BATTERY PLACE • NEW YORK CITY

BOOK NOOK

BOOK REVIEWS

CRIPPLED CHILDREN—Earl D. McBride, B.S., M.D., F.A.C.S., Assistant Professor of Orthopedic Surgery, University of Oklahoma, School of Medicine; and Winifred R. Sink, A.B., R.N., Educational Director, Grace Hospital School of Nursing, Detroit, Michigan. Published by The C. V. Mosby Company, St. Louis. Price \$3.50. p.p. 379.

This is a very excellent handbook for those who come in contact with crippled children, whether it be the nurse or the social service worker. It gives a very clear description of the general principles of orthopedics, including equipment, operation room technique, and post-operative nursing care. A short, but good description of plaster of Paris technique follows. The principles of traction, both skin and skeletal are demonstrated.

Physical therapy is well outlined. Braces are considered. The rest of the monograph presents descriptions of some of the orthopedic conditions that one commonly encounters in general practice.

It is a very excellent short resume of the subject and would be found very useful by the orthopedic unit.

—M. E. P.

TREATMENT BY DIET—by Clifford J. Barborka, M.D., of the Department of Medicine of Northwestern University School of Medicine, Chicago, published by the J. B. Lippincott Company, of Philadelphia, Pa. Any book

meriting four editions in five years is certainly a leader in its field and needs no further recommendations. In this, the fourth edition, the author has made many revisions, particularly in chapters devoted to the vitamins, allergy, gall-bladder diseases, liver diseases, peptic ulcer, nephritis, diabetes and gastritis. Separate chapters are devoted to each disease to which special diets are important in therapy with a discussion of the fundamentals involved, the methods of application of diets and several diets to suit varied individuals and circumstances. Fact and theory are presented briefly and in an easily comprehended manner. Routine hospital diets are discussed and outlined; food composition tables are given together with recipes for various indicated preparations. The bibliography is that of an encyclopedia of nutritionists and metabolic experts indicating the tremendous amount of work expended by the author in preparing this work.

L.A.S.

ESSENTIALS OF THE DIAGNOSTIC EXAMINATION—John B. Youmans, B.A., M.S., M.D., Associate Professor of Medicine and Director of Post-graduate Instruction, Vanderbilt University Medical School. Published by the Commonwealth Fund, New York, 1940. Price \$3.00.

As stated in the preface the purpose of this book is to assemble in a single volume the minimum of diagnostic methods and procedures needed in the general practice of medicine.

The material is presented in three parts: I. The History and Physical Examination; II. Laboratory Tests; III. Miscellaneous Tests.

The author repeatedly emphasizes that the subjects are not completely covered. In achieving brevity the book merits some criticism in the specific examples chosen: ex:



THE AO OTOSCOPE on the beam

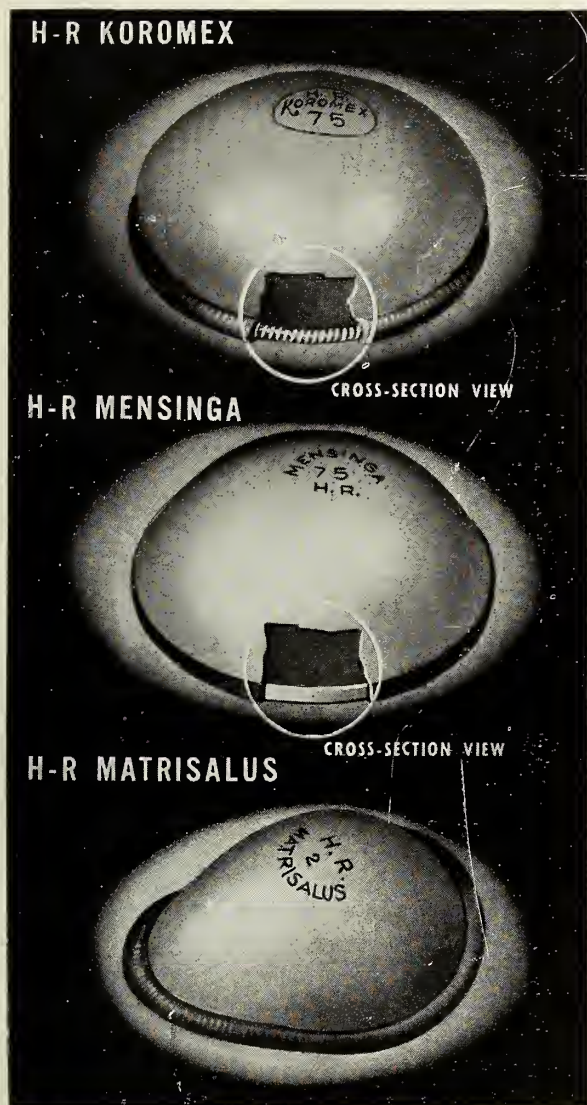
A reflecting prism allowing direct vision along the beam and eliminating internal reflection is the heart of the AO Oscope. Featured also are interchangeable specula in three sizes; instantly adjustable light intensity; and detail magnification built into a precision assembly.

The American Optical Oscope, complete with three sizes of specula, adjustable intensity battery case and extra bulbs, for use as a pocket set.

By AMERICAN OPTICAL COMPANY



Diaphragms for EVERY Condition



HOLLAND-RANTOS offers a most complete line of diaphragms. We invite inquiries concerning specific conditions.

• • •

The H-R Koromex diaphragm (coil spring type) is available in sizes from No. 50 to No. 105 mm., and is indicated for use in all normal anatomies.

The H-R Mensinga diaphragm (watch or flat spring) is available in sizes from No. 50 to No. 90 mm. including half sizes, and is indicated where there is a slight redundancy of the mucosa of the retro pubic space, or a slight relaxation of the anterior vaginal wall.

The H-R Matrisalus diaphragm is available in sizes—No. 1 to No. 6 corresponding to 65, 70, 75, 80, 85 and 90 mm. This special shaped diaphragm is indicated in cases of cystocele or prolapse where, owing to relaxed vaginal walls, the ordinary diaphragm cannot be retained in position.

**Send for copy of "Physician's Diaphragm Chart
and Fitting Technique"**

HOLLAND-RANTOS CO., Inc.

551 FIFTH AVE. - - NEW YORK
308 W. WASHINGTON ST. - CHICAGO
520 WEST 7TH ST. - LOS ANGELES

"the immobility of angina pectoris or coronary occlusion . . . ' as though this were a generally accepted symptom common to these two conditions. Also from the practical aspect one finds passing reference to proctoscopy (three lines) in comparison to twenty-one pages devoted to examination of the feces. A technique for proctoscopy could well have been included.

The section on "History" is good but a bit argumentative. The section on "The Chest" is well balanced; that on "The Heart" is particularly good though percussion in the left third interspace to estimate waistline filling is not specifically stressed. "The Neurological Examination" is well covered. The section, "Laboratory Tests" is clearly presented and very readable. The Appendix and numerous figures and tables offer concisely the answers to many questions which arise in the mind of the reader.

It is commendable that the vast material covered in this small volume could be so well presented. The book is stimulating to read and the author has offered in conclusion a well chosen list of monographs which is entitled "Suggestions for Additional Reading" which enables the reader to inform himself in detail on subjects which this book can but briefly sketch.

P.W.M.

NEW BOOKS RECEIVED

MEDICOLEGAL & INDUSTRIAL TOXICOLOGY, Criminal Investigation, and Occupational Diseases—Henry J. Eilmann, Ph.D. Published by the Blakiston Company, Philadelphia, Pa., January 4, 1940. Price \$3.00. Containing 324 pages.



The
W. E. ISLE CO.
PHONE VICTOR 2350
2ND FLOOR-1121 GRAND
KANSAS CITY, MISSOURI

ISLE BUILT LIMBS

Approved by the
American College
of Surgeons

*86c out of each \$1.00 gross income
used for members benefit*

**PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION**



Hospital, Accident, Sickness

INSURANCE



For ethical practitioners exclusively
(52,000 Policies in Force)

**LIBERAL HOSPITAL EXPENSE
COVERAGE**

\$5,000.00 ACCIDENTAL DEATH
\$25.00 weekly indemnity, accident and sickness

For
\$10.00
per year

\$10,000.00 ACCIDENTAL DEATH
\$50.00 weekly indemnity, accident and sickness

For
\$33.00
per year

\$15,000.00 ACCIDENTAL DEATH
\$75.00 weekly indemnity, accident and sickness

For
\$99.00
per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

\$9,500,000 PAID FOR CLAIMS

\$200,000 deposited with State of Nebraska for
protection of our members.
Disability need not be incurred in line of duty—benefits
from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago
Phone Randolph 8855

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM
Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

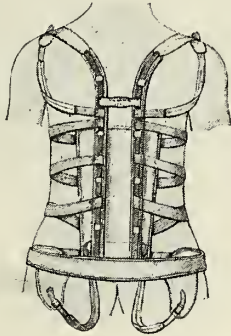
Kansas City, Mo.

Telephone—VICTOR 4850

Registered by the Council on Medical Education and Hospitals of the
A.M.A.

BACK BRACE

For correction of faulty posture, severe sacro-iliac strain, and convalescent treatment of fracture of spine.



P. W. HANICKE MFG. CO.

1013 McGee Street
KANSAS CITY, MO.

Tel. Victor 4750

Cook County

Graduate School of Medicine

(In affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue, starting every two weeks. General Courses One, Two, Three and Six Months; Clinical Courses; Special Courses.

MEDICINE—Two Weeks Intensive Course starting October 7th. Two Weeks Course in Gastro-Enterology starting October 21st. One Month Course in Electrocardiography and Heart Disease every month, except months of August and December.

FRACTURES & TRAUMATIC SURGERY—Ten Day Intensive Course starting September 23rd. Informal Course every week.

GYNECOLOGY—Two Weeks Intensive Course starting October 7th. Clinical and Didactic Courses every week.

OBSTETRICS—Two Weeks Intensive Course starting October 21st. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks Intensive Course starting September 9th. Informal and Personal Courses every week.

OPHTHALMOLOGY—Two Weeks Intensive Course starting September 23rd. Informal Course every week.

ROENTGENOLOGY—Special Courses X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

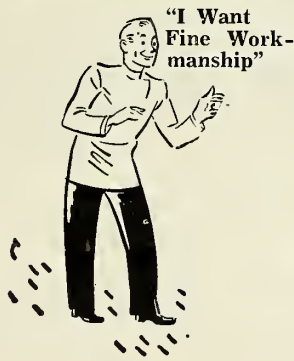
GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES

TEACHING FACULTY—ATTENDING STAFF OF COOK COUNTY HOSPITAL

Registrar, 427 South Honore Street, Chicago, Ill.



"I Want
Quality
Products"



"I Want
Fine Work-
manship"



"I Want
Dependable
Service"



"I Get All 3 At
Quinton-
Duffens"

Yes, you get all three at
Quinton-Duffens
combined
with a friendly personnel
striving to please.

QUINTON-DUFFENS OPTICAL COMPANY

Your Local Independent Wholesaler

HUTCHINSON,

TOPEKA,

SALINA,

COMPENDIUM OF REGIONAL DIAGNOSIS IN LESIONS OF THE BRAIN AND SPINAL CORD—Robert Bing, Professor of Neurology, University of Basel, Switzerland. Translated and edited by Webb Haymaker, assistant clinical professor of Neurology at the University of California. Eleventh edition published by the C. V. Mosby Company, St. Louis, Missouri. Price \$5.00.

CANCER IN CHILDHOOD, And A Discussion of Certain Benign Tumors—Edited by Harold W. Dargeon, M.D. Published by the C. V. Mosby Company, St. Louis, Missouri, 1940. Price \$3.00.

MANAGEMENT OF OBSTETRIC DIFFICULTIES—Paul Titus, M.D. Second Edition, published by the C. V. Mosby Company, St. Louis, Missouri. Price \$10.00.

ELMER AND ROSE PHYSICAL DIAGNOSIS—Revised by Harry Walker, M.D. Eighth edition published by the C. V. Mosby Company of St. Louis. Price \$8.75.

ARTHRITIS, And Allied Conditions—Bernard I. Comroe, M.D. Published by Lea & Febiger, Philadelphia, 1940. Price \$8.50.

THE NEWER NUTRITION IN PEDIATRIC PRACTICE—I. Newton Kugelmass, M.D. Published by the J. B. Lippincott Company, Philadelphia, Pa., 1940. Price \$10.00.

PRINCIPLES OF SURGICAL CARE, Shock and Other Problems—Alfred Blalock, M.D. Published by the C. V. Mosby Company, St. Louis, Missouri, 1940. Price \$4.50.

PHYSICAL THERAPY FOR NURSES — Richard Kovacs, M.D. Second edition published by Lea & Febiger, Philadelphia, Pa., 1940. Price \$3.25.

PROFESSIONAL PROTECTION

SINCE 1899
SPECIALIZED
SERVICE

A DOCTOR SAYS:

"By luck I took out your insurance about two weeks prior to treating the case which caused all the trouble. Today I would not practice one day regardless of finances without it."

THE

MEDICAL PROTECTIVE COMPANY

OF

FORT WAYNE, INDIANA

DOCTOR - PATIENTS LIKE THIS
CHOCOLATE - FLAVORED EMULSION
OF LIQUID PETROLATUM!

TASTES LIKE THE CHOCOLATE IN A
DELICIOUS DESSERT

- Your patients will not object to taking this Emulsion of Liquid Petrolatum Chocolate Flavored. There is no oily after-taste! It has the appearance and the flavor of the chocolate in a delicious chocolate dessert. It may be obtained without phenolphthalein—or with 5 grains or 1½ grains to the fluid ounce. This product contains 60% Liquid Petrolatum U. S. P. and 1% Agar Agar.

The SMITH-DORSEY COMPANY

LINCOLN, NEBRASKA

Manufacturers of

Pharmaceuticals to the Medical Profession Since 1908



• A PRESCRIPTION PRODUCT DESIGNED ESPECIALLY FOR PHYSICIANS (note prescription label on the bottle).

MAIL THIS COUPON

Gentlemen: Please send me a sample of Emulsion Liquid Petrolatum Chocolate Flavored

☐ With Phenolphthalein

☐ Plain

Dr.

Address

City

State



THIAMINE HYDROCHLORIDE SQUIBB

(CRYSTALLINE SYNTHETIC VITAMIN B₁ HYDROCHLORIDE)

... of definite value in prophylaxis and treatment of severe forms of Vitamin B₁ deficiency

An outstanding contribution of American biochemical research—the synthesis of thiamine—pure Vitamin B₁ hydrochloride—provides a most useful addition to the physician's armamentarium. It affords a precise and acceptable means of administering Vitamin B₁. It is also economical.

Thiamine Hydrochloride Squibb is of definite value in the prevention and correction of beriberi; in securing optimal growth of infants and children; in correcting and preventing anorexia of dietary origin in certain states; and in conditions indicating interference with proper assimilation of Vitamin B₁. There is likewise some evidence of its value in treatment of alcoholic neuritis, the neuritis of pregnancy and the neuritis of pellagra.

AVAILABLE IN TWO DOSAGE FORMS

The route of administration of Thiamine Hydrochloride is at the option of the physician. The oral administration of Thiamine Hydrochloride Tablets is efficacious and convenient for the average case of Vitamin B₁

deficiency. Parenteral administration of Thiamine Hydrochloride Solution Squibb is suggested for use where quick results are desired or where gastro-intestinal disease may interfere with absorption. Both the tablets and the solution are stable and economical.

HOW SUPPLIED

Thiamine Hydrochloride Tablets Squibb for oral administration

- 1-mg. tablets (333 International Units)
- 3-mg. tablets (1000 International Units)
- 5-mg. tablets (1667 International Units)
- 10-mg. tablets (3333 International Units)

All potencies available in bottles of 50, 100, 250, 500 and 1000 tablets.

Thiamine Hydrochloride Solution Squibb for parenteral administration

- 1-cc. ampuls—10 mg. 3333 International Units per cc.
- 5-cc. diaphragm-capped vials
 - 10 mg. (3333 International Units) per cc.
 - 25 mg. (8333 International Units) per cc.
 - 50 mg. (16,667 International Units) per cc.
- 10-cc. diaphragm-capped vials
 - 10 mg. (3333 International Units) per cc

For literature write Professional Service Dept., 745 Fifth Ave., N. Y.

E·R·SQUIBB & SONS, NEW YORK
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

ENDOCRINE THERAPY IN GENERAL PRACTICE—E. L. Sevringhaus, M.D., F.A.C.P. Third edition, published by the Year Book Publishers, Inc., Chicago, Illinois, 1940. Price \$2.75.

PSYCHOLOGICAL AND NEUROLOGICAL DEFINITIONS AND THE UNCONSCIOUS—Samuel Kahn, M.D., Ph.D. Published by the Meador Publishing Company, 1940. Price \$2.00.

DERMATOLOGIC THERAPY IN GENERAL PRACTICE—Marion B. Sulzberger, M.D., and Jack Wolf, M.D. Published by the Year Book Publishers, Inc., Chicago, Illinois, 1940. Price \$4.50.

THE COMPLETE PEDIATRICIAN—Wilburt C. Davison, M.D. Third edition published by the Duke University Press, Durham, N. C., 1940. Price \$3.75.

UNCONQUERED ENEMY—Boris Sokoloff, M.D. Published by the Greystone Press, New York, 1940. Price \$1.75.

PSYCHIATRY FOR NURSES—Louis J. Karnosh, M.D. Published by the C. V. Mosby Company, St. Louis, Missouri, 1940.

COMPLETE GUIDE FOR THE DEAFENED—A. F. Niemoeller. Published by Harvest House, New York, 1940. Price \$3.00.

MODERN DIABETIC CARE—Herbert Pollack, M.D. Published by Harcourt, Brace & Company, New York, 1940. Price \$2.00.

INTRODUCTION TO MEDICINE—Don C. Sutton, M. D. Published by the C. V. Mosby Company, St. Louis, Missouri, 1940. Price \$3.25.

HANDBOOK OF HEARING AIDS—A. F. Niemoeller. Published by Harvest House, New York, 1940. Price \$3.00.

ACCEPTED FOODS AND THEIR NUTRITIONAL SIGNIFICANCE—Published by the American Medical Association, 535 North Dearborn Street, Chicago.

THE ARNOLD DRUG COMPANY

523 KANSAS AVENUE

TOPEKA, KANSAS

We Have Catered to the Medical Profession for 71 Years With Ethical Products

ELI LILLY—ABBOTT AND SHARP AND DOHME

Nothing Finer Made

SILVER PICRATE

Wyeth

is indicated in the treatment of

Silver Picrate is a definite crystalline compound of silver and picric acid. Available in the form of crystals and soluble trituration for the preparation of solutions; suppositories; water-soluble jelly; and powder for insufflation.

- ★ Acute Anterior Urethritis
(due to Neisseria gonorrhoeae)
- ★ Trichomonas Vaginalis
Vaginitis
- ★ Vaginal Moniliasis
- ★ Bartholinitis and Skeneitis
(due to Trichomonas Vaginalis)

Complete information mailed on request

★ JOHN WYETH & BROTHER, INCORPORATED ★
PHILADELPHIA, PA.

Behind

MERCUROCHROME

(dibrom-oxymercuri-fluorescein-sodium)



is a background of

Precise manufacturing methods insuring uniformity

Controlled laboratory investigation

Chemical and biological control of each lot produced

Extensive clinical application

Thirteen years' acceptance by the Council of Pharmacy and Chemistry of the American Medical Association



A booklet summarizing the important reports on Mercurochrome and describing its various uses will be sent to physicians on request.

Hynson, Westcott & Dunning, Inc.
BALTIMORE, MARYLAND

... Technique

Correct typography and perfect printing is as essential in the well ordered professional office as any other physical equipment. Master Craftsmen plan and execute every piece of printed matter. The growing list of publications, books, periodicals, magazines, and broadsides is a guarantee of superior and forceful attention compelling publicity. Call today . . .

PHONE 5956

SERVICE PRINT SHOP

for COMPLETE
PRINTING SERVICE

1515 LANE

TOPEKA, KANSAS

You must be getting ready for Children's Day, Dr. Brown, buying all this Chewing Gum.

Keeping Chewing Gum in my office is a fine way to build good will, Mac, because both youngsters and grown-ups appreciate it when you offer it to them.

A suggestion for you, Doctor—on how to build good will

THE CHEWING GUM WAY

Offering Chewing Gum to young patients is a very friendly thing to do, and you can be sure of a ready, pleasant response to it.

Enjoy Chewing Gum yourself, Doctor. It's just right-sized to carry conveniently in your pocket.

U-107

1939 YEAR BOOK OF GENERAL THERAPEUTICS—
 Edited by Bernard Fantus, M.D., and Leroy Hendrick
 Sloan, M.D. Published by the Year Book Publishers, Inc.,
 304 South Dearborn Street, Chicago, Illinois. Price \$2.50.
 Containing 532 pages, indexed.

AUXILIARY

PRESIDENT'S MESSAGE

Now that vacation days are over we turn back to our work in the home and community. It is significant that Labor Day stands at the end of vacation days. We as Auxiliary members have much to do in the eight months left of our auxiliary year.

The Hygeia contest this year starts September 1st and

Mrs. Curry has splendid ideas for using Hygeia to pass health education on thru the newspapers and schools. Let's cooperate with her. She may have a real surprise for us soon too.

We are sending loose leaf record books to the chairmen of the state standing committees and councilors for help and guidance thru the years. You might like to use the same idea in each county, having a record book for the president and chairmen of standing committees so the new workers will not have to start the year empty handed. If it is only the year's report you have to pass on, it will be helpful. Please think this over.

If your treasury permits, why not place a Hand Book in each record book for reference. Also our Year Book and the materials sent out by our national and state workers as well as suggestions by the keepers of the book.

Mrs. Holcombs, our national president, is stressing the National Bulletin subscriptions as she feels "thru information, inspiration can be stimulated and thru knowledge of successful activities, more activities will be motivated." Mrs. H. L. Scales, of Hutchinson, is our state circulation manager and the national auxiliary asks her to secure

Phone
3-3261

The OVERTON ELECTRIC CO., Inc.

522
Jackson

Specializing in all forms of
FLUORESCENT LIGHTING.



Buy the finest
HY - GRADE
LAMPS—Look
for the Red
Triangle.

AN ELECTRICAL SERVICE
THAT IS COMPLETE.

TOPEKA

S. D. THACHER, President

KANSAS



OAKWOOD SANITARIUM

The beauty and quietness of the environment of Oakwood Sanitarium cannot be over emphasized. This makes the Institution ideal not only for nervous and mental patients but for convalescents and rest cures as well. Alcoholics and drug addicts are accepted.

Illustrated Booklet and Rates on Request

OAKWOOD SANITARIUM
Tulsa, Oklahoma, Route 6

NED R. SMITH, M.D.
 Resident Medical Director



PRENATAL SUPPORTS

The comfort afforded by the incorporation of elastic sections in supports is being more and more recognized. This is especially true of the younger patient who has never worn a support; at least, nothing more than an all-elastic garment.

For the above mentioned patient, S. H. Camp & Company has designed a support (illustrated) with a fabric back from which originates the adjustment; the *strong-tension elastic front* is reinforced with light material and is provided with tabs of cloth; also, *strong-tension elastic sides*. This furnishes a cloth-to-cloth control for the adjustment and gives a degree of support to the sacroiliac joints.

With a boned cloth back, we have support for the lumbar vertebrae.

Thus we have a lightweight, prenatal garment which offers a measure of support to the young pregnant patient of thin type-of-build and of normal proportions.

The Camp Line also provides a support designed along these same lines for the taller patient of intermediate type-of-build.

CAMP *Supports*
TRADE MARK

S. H. CAMP & COMPANY, JACKSON, MICHIGAN

World's largest manufacturers of Scientific Supports

Offices in New York, Chicago, Windsor, Ont., London, Eng.



subscriptions from one-fourth of our members. The goal for the U. S. is 6,000 subscriptions.

Mrs. Atkins and Mrs. Woods will try to bring our county and state histories to date and Mr. Munns has planned space for our records in the office in Topeka. Will you please help them when they call on you so we can have our records complete?

The newsletter will be out soon. You'll enjoy it.

It is my earnest desire to be of service to each county during the remaining months of our year so please call on me.

Mrs. Irma Blasdel.

FOR SALE—Ten bed, fully equipped hospital in town of 1700 population. Write Mrs. Florence Funk, Smith Center, Kansas.

FOR SALE—Medical Library, 165 volumes, Tice, Sajous. Dictionaries, Hand-books, etc. Also some laboratory equipment. Write, C. F. Deaver, Sabetha, Kansas.

FOR SALE—McKesson Gas Oxygen machine for use of oxygen and nitrous oxide and four tanks (empty) also a Burdick, Infra Red light. Write Mrs. H. J. Terrill, 205 E. 13th Street, Ottawa, Kansas.

FOR SALE—Complete office equipment for Eye, Ear, Nose and Throat of the late J. Frank McNaught, M.D., Girard, Kansas. Description and prices on request. Mrs. Ethel McNaught, Girard, Kansas.

WANTED—Resident doctor, village and rural practice at Alden in Central Kansas; partially equipped office of late Dr. David T. Muir for rent; good roads; pleasant community; large territory; expenses small; hospitals eight and fourteen miles. Write or call Mrs. D. T. Muir, Alden, Kansas.

THE STOKES HOSPITAL

Established 1904

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The **DRUG** treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Hed. Dir.

923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102

JOHNSON HOSPITAL CHANUTE, KANSAS

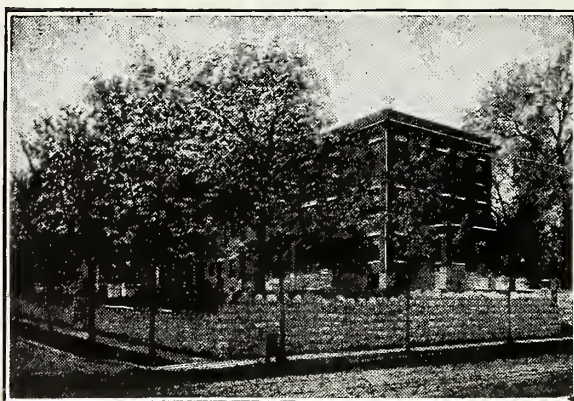
Complete Clinical
Laboratory
Radium
X-Ray

THE MAJOR CLINIC ASSOCIATION

3100 EUCLID AVENUE

KANSAS CITY, MISSOURI

A Well
Equipped
Institution
for the
Nervous and
Mental
Diseases and
Drug and
Tobacco
Addictions
Alcohol,



Beautiful
Location
Large,
Well Shaded
Grounds,
Spacious
Porches,
All Modern
Methods for
Restoring
Patients to a
Normal
Condition

HERMON S. MAJOR, M.D.
Medical Director

HENRY S. MILLETT, M.D.
Associate Medical Director

HERMON S. MAJOR, JR.
Business Manager

BALYEAT Hay Fever and Asthma Clinic

OSLER BUILDING OKLAHOMA CITY, OKLAHOMA

*DEVOTED EXCLUSIVELY to the DIAGNOSIS
and TREATMENT of ALLERGIC DISEASES*

MEDICAL STAFF

Ray M. Balyeat, M.A., M.D., F.A.C.P.
Director

George R. Felts, B.S., M.D.

Pediatrics

Carl L. Brundage, M.Sc., M.D.

Consultant in Dermatology

Wayne M. Hull, M.S., M.D., F.S.C.P.

Gastroenterology

Onis Geo. Hazel, D.S., M.D.

Consultant in Dermatology

O. Alton Watson, B.S., M.D., F.A.C.S.

Consultant in Otolaryngology

THE Lattimore Laboratories

TOPEKA, KANSAS

J. L. Lattimore, M. D. Director

A. C. Keith, B. S. Chemist

Allen Gold, M. A., M. T.

H. C. Ebendorf, M. T.

We invite consultation about the case that needs pathological service.

Freidman test \$5.00; Rabies treatment \$10.00; Wassermann-Kahn

\$2.00

Containers furnished upon request.

OFFICES:

Topeka, Kansas

El Dorado, Kansas

Sedalia, Mo.

McAlester, Okla.

TABLE OF CONTENTS

OCTOBER, 1940

ORIGINAL ARTICLES

The Role of Surgery in Painful Feet—Earl D. McBride, M.D., Oklahoma City, Oklahoma 409

A Clinical Approach to the Migraine Problem —D. V. Conwell, M.D., and C. J. Kurth, M.D., Halstead, Kansas 413

Tuberculosis Case-Findings in University of Kansas Students—Ralph I. Canuteson, M.D., Lawrence, Kansas 417

X-Ray Interpretation in Tuberculosis Case-Findings—Galen M. Tice, M.D., Kansas City, Kansas 420

Prolapse of the Intervertebral Disk—Francis A Carmichael, Jr., M.D., Kansas City, Missouri 422

Tularemia Complicated by Septicemia and Heart Disease —David Stump, M.D., and Francis Quinn, M.D., Kansas City, Kansas . . 426

EDITORIALS

Medicine Show—At Government Expense . . 429

Is It a Game 429

Dr. Cabot Rides Again 430

MISCELLANEOUS

President's Page 428

Eye, Ear, Nose and Throat 432

Cancer Control 433

Tuberculosis Control 434

News Notes 435

Auxiliary 448

Entered as second-class matter, May 2, 1914, at the Postoffice at Topeka, Kansas, under the Act of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, October 3, 1917. Authorized on July 2, 1918.

THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

EDITORIAL BOARD

W. M. MILLS, M.D., Editor, Topeka

L. E. ECKLES, M.D., Topeka
L. R. PYLE, M.D., Topeka

R. B. STEWART, M.D., Topeka
DON C. WAKEMAN, M.D., Topeka

INFORMATION

Ownership: The Journal is a non-profit publication owned and published monthly by The Kansas Medical Society.

Subscription: Membership in The Kansas Medical Society includes subscription to The Journal. Rates to others, except in foreign countries, are \$2.00 per year or 20c per copy.

Material: Scientific articles, editorials, and data of general interest are invited from all members. Articles are to be submitted on condition that they are contributed solely to this publication. A right is reserved to reject any material deemed unsatisfactory.

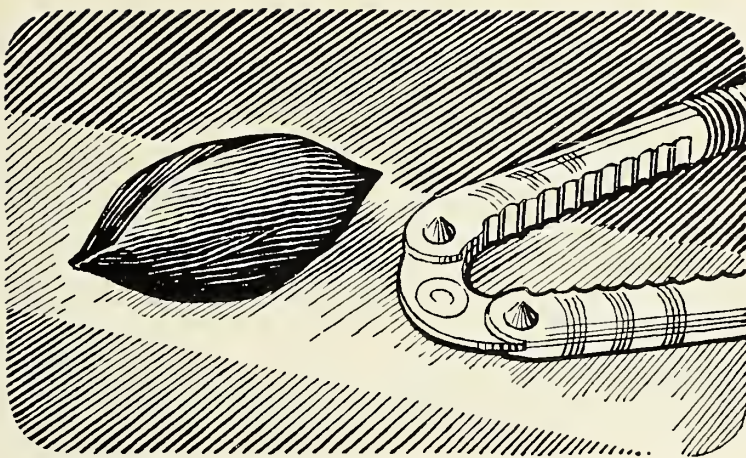
Manuscripts: Only manuscripts that are type written on one side, double spaced, and original copies can be accepted.

Manuscripts will be returned upon request.

Advertising: All advertising contracts, and all copy from advertisers under contract are subject to approval of the editorial board. Copy should be received by the 25th of each month to insure publication.

Reprints: Actual cost prices for reprints will be quoted upon request. Reprints should be ordered promptly after publication or forms may not be available.

Non-Responsibility: Although an effort is made to publish only accurate articles and legitimate advertisements. The Journal denies legal responsibility for any statements, opinions, or advertisements appearing under the names of contributors or concerns.



This is the pili-nut

The pili-nut is the toughest nut in the world to crack. Neither the ordinary nut-cracker nor the ordinary hammer will break its shell. Yet it can be opened. What is true of the pili-nut is equally true of many research problems. They're tough nuts. Ordinary methods won't open them—but they can be opened.

With the isolation of Adrenalin, the shell of endocrine mystery began to give way. This discovery first showed that the elusive hormones were definite chemical substances; it led to the unfolding of present-day knowledge of endocrinology.

The discovery of Adrenalin came from the Parke-Davis Research Laboratories. Just such pili-nut projects are constantly carried out in our Laboratories today—to make tomorrow's medical therapy safer, more efficient.

PARKE, DAVIS & COMPANY



PIONEERS IN RESEARCH ON MEDICINAL PRODUCTS

THE KANSAS MEDICAL SOCIETY

OFFICERS

PRESIDENT, F. L. LOVELAND, M.D., Topeka
 PRESIDENT-ELECT, C. D. BLAKE, M.D., Hays.
 PAST-PRESIDENT, C. C. NESSELRODE, M.D., Kansas City
 FIRST VICE-PRESIDENT, HENTY N. TIHEN, M.D., Wichita

SECOND VICE-PRESIDENT, J. I. LATTIMORE, M.D., Topeka
 SECRETARY, JOHN M. PORTER, M.D., Concordia
 TREASURER, GEO. M. GRAY, M.D., Kansas City
 AMA DELEGATE—J. F. HASSIG, M.D., Kansas City, Kansas

COUNCILORS AND COUNCILOR DISTRICTS

FIRST DISTRICT

J. W. Randell, M.D., Marysville, councilor. Marshall, Nemaha, Brown, Doniphan, Pottawatomie, Jackson, Atchison and Jefferson counties.

SECOND DISTRICT

O. W. Davidson, M.D., Kansas City, councilor. Leavenworth, Wyandotte, Douglas, Johnson, Franklin, Miami, Anderson and Linn counties.

THIRD DISTRICT

L. D. Johnson, M.D., Chanute, councilor. Woodson, Crawford, Bourbon, Neosho, Montgomery, Cherokee, Labette, Wilson and Allen counties.

FOURTH DISTRICT

J. L. Lattimore, M.D., Topeka, councilor. Wabaunsee, Shawnee, Coffey, Morris, Osage, Lyon and Chase counties.

FIFTH DISTRICT

M. Trueheart, M.D., Sterling, councilor. McPherson, Stafford, Marion, Barton, Harvey, Reno and Rice counties.

SIXTH DISTRICT

W. P. Callahan, M.D., Wichita, councilor. Chautauqua, Greenwood, Sedgwick, Kingman, Sumner, Butler, Harper, Cowley and Elk counties.

SEVENTH DISTRICT

F. R. Croson, M.D., Clay Center, councilor. Republic, Mitchell, Cloud, Washington, Jewell, Riley and Clay counties.

EIGHTH DISTRICT

L. S. Nelson, M.D., Salina, councilor. Dickinson, Ellsworth, Salina, Ottawa, Geary and Lincoln counties.

NINTH DISTRICT

J. H. A. Peck, M.D., St. Francis, councilor. Cheyenne, Sheridan, Decatur, Wallace, Logan, Sherman, Thomas, Rawlins, Norton and Gove counties.

TENTH DISTRICT

O. A. Hennerich, M.D., Hays, councilor. Osborne, Graham, Russell, Smith, Phillips, Ellis, Trego and Rooks counties.

ELEVENTH DISTRICT

A. C. Armitage, M.D., Kinsley, councilor. Comanche, Hodgeman, Edwards, Pawnee, Kiowa, Rush, Pratt, Barber and Ness counties.

TWELFTH DISTRICT

Geo. O. Speirs, M.D., Spearville, councilor. Hamilton, Stanton, Seward, Wichita, Stevens, Finney, Kearney, Lane, Greeley, Haskell, Meade, Clark, Grant, Scott, Ford, Gray and Morton counties.

Headquarters Office, Columbian Building, Topeka.

Clarence G. Munns, Executive Secretary.

... Technique

Correct typography and perfect printing is as essential in the well ordered professional office as any other physical equipment. Master Craftsmen plan and execute every piece of printed matter. The growing list of publications, books, periodicals, magazines, and broadsides is a guarantee of superior and forceful attention compelling publicity. Call today . . .

PHONE 5956

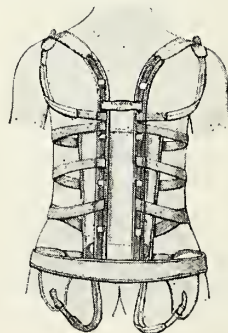
SERVICE PRINT SHOP

for COMPLETE
PRINTING SERVICE

1515 LANE TOPEKA, KANSAS

BACK BRACE

For correction of faulty posture, severe sacro-iliac strain, and convalescent treatment of fracture of spine.



P. W. HANICKE MFG. CO.

1013 McGee Street
KANSAS CITY, MO.

Tel. Victor 4750

COMMITTEES FOR 1940-1941

ALLIED GROUPS TO MEDICAL PRACTICE

George E. Milbank, M.D., Chairman, Wichita; G. A. Finney, M.D., Topeka; W. E. Janes, M.D., Eureka; Geo. E. Paine, M.D., Hutchinson; J. L. Latimore, M.D., Topeka; R. R. Melton, M.D., Marion; C. D. McKeown, M.D., Wichita; W. Y. Herrick, M.D., Wakeeney; T. P. Haslam, M.D., Council Grove.

AUTOMOBILE ACCIDENTS

Orville R. Clark, M.D., Chairman, Topeka; F. P. Helm, M.D., Topeka; H. P. Palmer, M.D., Scott City; H. P. Jones, M.D., Lawrence; Roy H. Moser, M.D., Holton; F. A. Moorehead, M.D., Neodesha; E. A. Smiley, M.D., Junction City; Hector Morrison, M.D., Smith Center; Fred G. Schenck, M.D., Burlingame.

AUXILIARY

C. Omer West, M.D., Chairman, Kansas City; L. B. Gloyne, M.D., Kansas City; L. A. Proctor, M.D., Parsons; F. E. Coffey, M.D., Hays; J. S. Reifsnider, M.D., Wichita; J. J. Brownlee, M.D., Hutchinson; H. H. Woods, M.D., Topeka; C. C. Nesselrode, M.D., Kansas City; A. C. Dingus, M.D., Yates Center.

CONTROL OF CANCER

H. E. Snyder, M.D., Chairman, Winfield; C. A. Hellwig, M.D., Wichita; J. S. Hibbard, M.D., Wichita; M. B. Miller, M.D., Topeka; Lewis G. Allen, M.D., Kansas City; C. D. Blake, M.D., Hays; F. R. Croson, M.D., Clay Center; M. Truchart, M.D., Sterling; C. C. Nesselrode, M.D., Kansas City; Karl E. Voldeng, M.D., Wellington; A. K. Owen, M.D., Topeka.

CHILD WELFARE

B. I. Krebbiel, M.D., Chairman, Topeka; Paul C. Carson, M.D., Wichita; Paul E. Belknap, M.D., Topeka; Earl G. Padfield, M.D., Salina; J. A. Wheeler, M.D., Newton; D. M. Medearis, M.D., Kansas City; Paul R. Ensing, M.D., Topeka; F. L. Menahan, M.D., Wichita; T. J. Brown, M.D., Hoisington.

CONSTITUTION AND RULES

A. W. Fegly, M.D., Chairman, Wichita; R. T. Nichols, M.D., Hiawatha; J. E. Henshall, M.D., Osborne; H. E. Haskins, M.D., Kingman; C. M. Nelson, M.D., Oberlin.

DEFENSE BOARD

L. S. Nelson, M.D., Chairman, Salina; James D. Bowen, M.D., Topeka.

ENDOWMENT

H. L. Chambers, M.D., Chairman, Lawrence; F. C. Boggs, M.D., Topeka; E. S. Edgerton, M.D., Wichita; J. L. Grove, M.D., Newton; P. A. Pettit, M.D., Paola; J. T. Reid, M.D., Iola; H. O. Bullock, M.D., Independence; Earl L. Vermilion, M.D., Salina; J. L. Jensen, M.D., Colby.

EXECUTIVE

F. L. Loveland, M.D., Chairman, Topeka; C. D. Blake, M.D., Hays; J. M. Porter, M.D., Concordia; Geo. M. Gray, M.D., Kansas City; C. C. Nesselrode, M.D., Kansas City.

CONSERVATION OF EYESIGHT

Lyle S. Powell, M.D., Chairman, Lawrence; W. M. Scales, M.D., Hutchinson; George Gsell, M.D., Wichita; J. G. Janney, M.D., Dodge City; H. L. Kirkpatrick, M.D., Topeka; H. W. Powers, M.D., Topeka; John A. Billingsley, M.D., Kansas City; C. J. Mullen, M.D., Kansas City; R. E. Cheney, M.D., Salina; W. W. Reed, M.D., Topeka; W. D. Pitman, M.D., Pratt.

STUDY OF HEART DISEASE

Philip W. Morgan, M.D., Chairman, Emporia; Maurice Snyder, M.D., Salina; James G. Stewart, M.D., Topeka; H. H. Jones, M.D., Winfield; T. T. Holt, M.D., Wichita; C. W. Erickson, M.D., Pittsburg; W. H. Algie, M.D., Kansas City; Porter M. Clark, M.D., Independence; G. M. Edmonds, M.D., Horton.

HISTORY

L. F. Barney, M.D., Chairman, Kansas City; W. S. Lindsay, M.D., Topeka; David E. Green, M.D., Pleasanton; G. L. Kerley, M.D., Topeka; F. S. Hawes, M.D., Russell.

HOSPITAL SURVEY

A. R. Hatcher, M.D., Chairman, Wellington; R. H. Kiene, M.D., Concordia; C. E. Joss, M.D., Topeka; M. F. Russell, M.D., Great Bend; Cecil Snyder, M.D., Winfield; L. C. Joslin, M.D., Harper; C. R. Rombold, M.D., Wichita; J. H. A. Peck, M.D., Francis; R. E. Speirs, M.D., Dodge City; Conrad M. Barnes, M.D., Seneca; D. B. Parker, M.D., Ransom.

LOCATIONS

A. C. Armitage, M.D., Chairman, Kinsley; C. F. Young, M.D., Fort Scott; W. R. Morton, M.D., Green; O. W. Longwood, M.D., Stafford; C. W. Inge, M.D., Formoso; D. D. Vermillion, M.D., Goodland; C. A. Gripkey, M.D., Kansas City.

MATERNAL WELFARE

Ray A. West, M.D., Chairman, Wichita; Porter D. Brown, M.D., Salina; L. A. Calkins, M.D., Kansas City; Howard C. Clark, M.D., Wichita; C. O. Merideth, M.D., Emporia; H. R. Ross, M.D., Topeka; Letteer G. H. Lewis, M.D., McPherson; M. D. McComas, M.D., Courtland; Walter H. Weidling, M.D., Topeka; F. L. DePew, M.D., Howard; A. L. Hilbig, M.D., Liberal.

MEDICAL ECONOMICS

H. M. Glover, M.D., Chairman, Newton; I. R. Burket, M.D., Ashland; W. R. Dillingham, M.D., Salina; J. F. Gsell, M.D., Wichita; B. A. Nelson, M.D., Manhattan; A. J. Revell, M.D., Pittsburg; R. G. Klein, M.D., Dodge City; E. N. Robertson, Sr., M.D., Concordia; F. E. Wrightman, M.D., Sabetha; A. M. McDermott, M.D., Ellis; A. C. Eitzen, M.D., Hillsboro.

MEDICAL SCHOOLS

Fred J. McEwen, M.D., Chairman, Wichita; Fred E. Angle, M.D., Kansas City; Justin A. Blount, M.D., Larned; A. R. Chambers, M.D., Iola; L. R. McGill, M.D., Hoisington; L. F. Schuhmacher, M.D., Dodge City; D. A. Bitzer, M.D., Washington; L. J. Beyer, M.D., Lyons; L. B. Spake, M.D., Kansas City.

NECROLOGY

J. H. O'Connell, M.D., Chairman, Topeka; A. E. Gardner, M.D., Wichita; Henry Haerle, M.D., Marysville.

PHARMACY

R. H. Moore, M.D., Chairman, Lansing; H. W. Duvall, M.D., Hutchinson; J. B. Ungles, M.D., Satanta; E. O. King, M.D., Herington; R. E. White, M.D., Garnett; W. H. Iliff, M.D., Baxter Springs; G. A. Leslie, M.D., McDonald.

PUBLIC HEALTH AND EDUCATION

Earl L. Mills, M.D., Chairman, Wichita; Robert M. Carr, M.D., Junction City; J. N. Sherman, M.D., Chanute; C. T. Moran, M.D., Arkansas City; R. C. Jeffries, M.D., Atchison; Robert Sohlberg, M.D., McPherson; D. R. Davis, M.D., Emporia; N. P. Sherwood, M.D., Lawrence; C. H. Munger, M.D., Emporia; C. C. Hawke, M.D., Winfield; H. C. Sartorius, M.D., Garden City.

PUBLIC POLICY

E. C. Duncan, M.D., Chairman, Fredonia; Hugh A. Hope, M.D., Hunter; L. L. Bresette, M.D., Kansas City; J. F. Hassig, M.D., Kansas City; R. W. Urie, M.D., Parsons; R. G. Ball, M.D., Manhattan; C. A. Dieter, M.D., Harper; E. M. Ireland, M.D., Coats; Herbert Atkins, M.D., Pratt; W. F. Bernstorf, M.D., Winfield; R. W. Van Deventer, M.D., Wellington; J. B. Carter, M.D., Wilson.

SCIENTIFIC WORK

John M. Porter, M.D., Chairman, Concordia; St. Clair O'Donnell, M.D., Ellsworth; R. M. Isenberger, M.D., Kansas City; Maurice A. Walker, M.D., Kansas City; Leslie L. Saylor, M.D., Topeka; J. D. Colt, Jr., M.D., Manhattan; R. I. Canuteson, M.D., Lawrence; T. P. Butcher, M.D., Emporia; E. M. Harms, M.D., Newton.

STORMONT MEDICAL LIBRARY

L. M. Tomlinson, M.D., Chairman, Harveyville; J. M. Mott, M.D., Lawrence; Robert P. Knight, M.D., Topeka.

TUBERCULOSIS

Henry N. Tihen, M.D., Chairman, Wichita; C. H. Lerrigo, M.D., Topeka; C. F. Taylor, M.D., Norton; F. A. Trump, M.D., Ottawa; N. C. Nash, M.D., Wichita; Omer M. Raines, M.D., Topeka; F. C. Beelman, M.D., Topeka; J. W. Spearing, M.D., Columbus; W. G. Reinhart, M.D., Pittsburg.

VENEREAL DISEASE

Arthur D. Gray, M.D., Chairman, Topeka; G. E. Kassebaum, M.D., Eldorado; R. H. Reidel, M.D., Topeka; J. V. Van Cleve, M.D., Wichita; W. J. Singleton, M.D., LaCrosse; Harold E. Neptune, M.D., Salina; C. D. Updegraff, M.D., Greensburg; M. J. Renner, M.D., Goodland; W. L. Pratt, M.D., Leavenworth; George B. Morrison, M.D., Wichita; R. S. McKee, M.D., Leavenworth.

Daily Reference to These Volumes Will Simplify YOUR Practice Problems

Brand-new PRACTICE OF MEDICINE—3rd Edition

By JONATHAN C. MEAKINS

Professor of Medicine and Director of Department of Medicine, McGill University; Physician - in - Chief, Royal Victoria Hospital, Montreal.
3rd Edition. 1430 pages, 562 illustrations, including 48 color plates.

PRICE, \$10.00

A new third edition of Meakins' "PRACTICE OF MEDICINE" coming so soon after the second (1938) edition is definite evidence of the growing popularity of this book.

Besides the many changes and additions, the third edition has the same qualities which made previous editions so popular:

1st. It approaches the study of disease from the viewpoint of physiological pathology—an approach rapidly gaining favor with practicing physicians

and teachers.

2nd. It is profusely illustrated—the first American book on medical practice to be illustrated.

This edition is printed on green tint paper. It has been proved that green tint paper makes reading easier, especially when the reading is done under artificial light. Most practicing physicians are compelled to do their reading at night. It is expected that this type of paper will be a boon to night reading.

New Features

A large new section has been added to Chemotherapy of Pneumonia—sulphanilamide derivatives, suphapyridine and quinine salts.

New material has been added on Benign Lymphogranuloma (Boeck's Sarcoid.)

New sections have been added on Arteriosclerotic Vascular Diseases and Syphilitic Cardiac Diseases. Chronic Gastritis discussion is new and enlarged, and a large new section on Hydatid Disease has been added.

Additions have been made to general vitamin discussion—with a particular addition to Vitamin B section; Vitamin C has been elaborated on, additions made on Subclinical Vitamin C Deficiency and an introductory discussion is given on Vitamin D. Vitamin K and Vitamin P sections have been added. There is also an addition to Hyper-
vitaminosis.

Discussion of Electroencephalopathy has been included. Large new sections have been added on Erythematoses—Erythema Nodosum, Multiforme, Arthriticum; Lupus Erythematosus, Disseminatus; Benign Lymphogranuloma; and Traumatic Shock (primary and secondary) and the theories proposed to explain it.

DISEASES of the SKIN

By R. L. SUTTON and R. L. SUTTON, JR.

1549 pages, 1452 illustrations, 21 color plates.

PRICE, \$15.00

The authors of this volume believe that the time has come to tie the descriptions and concepts of disorders of the skin with general medicine and biology. Therefore, the 10th Edition of "Diseases of the Skin" emphasizes the view-point that skin lesions are frequently the symptoms of internal diseases. Another outstanding feature of the book is the unusual number of helpful illustrations. Sound and effective treatment is featured throughout, and descriptions of all significant entities, syndromes, concepts, and of many exotic, unusual and exceptional dermatoses are included.

Use Coupon to Send for These TODAY!

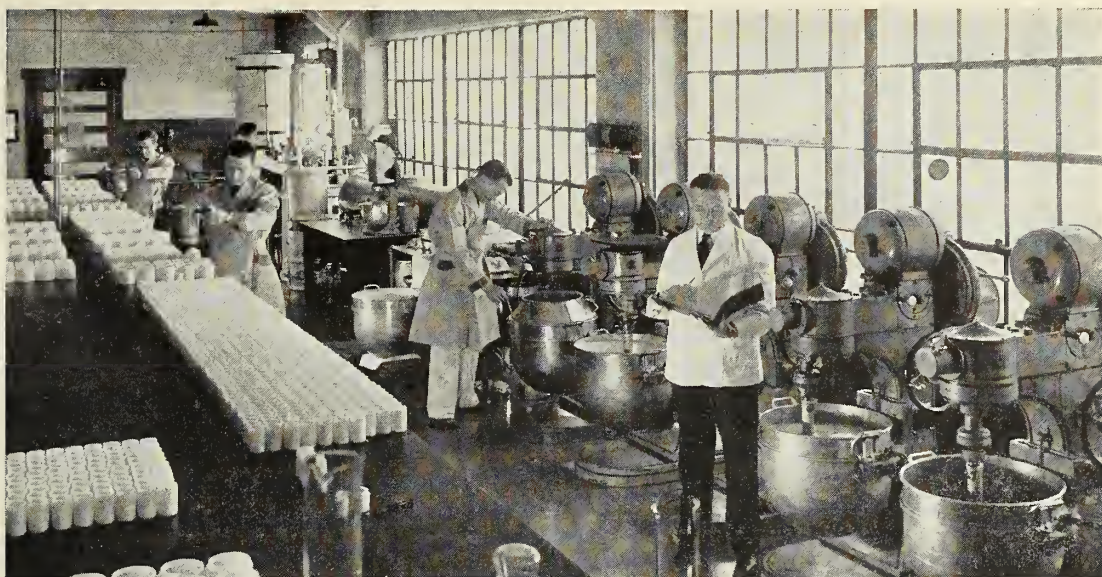
THE C. V. MOSBY COMPANY
3525 Pine Blvd., St. Louis, Mo.

KMJ 10-40

Gentlemen: Send me () Meakins' "Practice of Medicine," price, \$10.00.
() Suttons' "Diseases of the Skin," price, \$15.00.

Dr. _____

Address _____



CREAM DEPARTMENT OF LUZIER'S INC.

Fine cosmetics are the result of (1) scientifically sound formulas; (2) the selection of choice raw materials; and (3) competently supervised manufacturing processes. . . . Preparations by Luzier are selected to suit individual requirements and preferences. Their formulary may be had on request.

**LUZIER'S FINE COSMETICS AND PERFUMES
ARE DISTRIBUTED IN KANSAS BY:**

C. B. BURBRIDGE, *Divisional Distributor*

P. O. Box No. 1010

Lincoln, Nebraska

DISTRICT DISTRIBUTORS

EDWIN S. KIMMEL

P. O. Box No. 582

Salina, Kansas

ELSIE HARING

10 East Tenth Street

Hutchinson, Kansas

SUB-DISTRIBUTORS

LAURA CUDDY

615 Fremont Street

Manhattan, Kansas

MYRA KIMMEL

P. O. Box No. 582

Salina, Kansas

MARY I. GREENE

301 West Fifth Street

Junction City, Kansas

LORRAINE BILLINGTON

Lorraine's Beauty Shop

Dodge City, Kansas

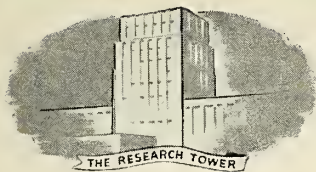
COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Allen	J. T. Reid, M.D.	Iola	O. L. Cox, M.D.	Iola
Anderson	Harold F. Spencer, M.D.	Garnett	John N. Carter, M.D.	Garnett
Atchison	M. T. Dingess, M.D.	Atchison	W. L. Anderson, M.D.	Atchison
Barber	J. M. Gacusana, M.D.	Sharon	K. R. Grigsby, M.D.	Medicine Lodge
Barton	L. R. McGill, M.D.	Hoisington	L. L. Wenke, M.D.	Great Bend
Bourbon	J. J. Cavanaugh, M.D.	Fort Scott	L. E. Ketner, M.D.	Fort Scott
Brown	Ralph M. Wyatt, M.D.	Hiawatha	E. K. Lawrence, M.D.	Hiawatha
Butler-Greenwood	Floyd Dillenbeck, M.D.	El Dorado	W. E. Janes, M.D.	Eureka
Central Kansas	G. C. Unrein, M.D.	Hays	Alza McDermott, M.D.	Ellis
Chautauqua	E. A. Marrs, M.D.	Sedan	Estelle Edwards, M.D.	Cedar Vale
Cherokee			W. H. Iliff, M.D.	Baxter Springs
Clay	G. B. McIlvain, M.D.	Clay Center	G. W. Bale, M.D.	Clay Center
Cloud	H. R. St. John, M.D.	Concordia	E. Norris Robertson, Jr., M.D.	Concordia
Coffey	A. N. Gray, M.D.	Burlington	A. B. McConnell, M.D.	Burlington
Comanche	R. A. J. Shelly, M.D.	Coldwater	Lyle G. Glenn, M.D.	Protection
Cowley	N. B. Fall, M.D.	Winfield	F. W. Hall, M.D.	Winfield
Crawford	A. J. Revelle, M.D.	Pittsburg	F. W. Haigler, M.D.	Cherokee
Dickinson	W. A. Klingberg, M.D.	Hope	H. R. Turner, M.D.	Hope
Doniphan	C. E. Waller, M.D.	Troy	Ray Meidinger, M.D.	Highland
Douglas	C. B. Johnston, M.D.	Eudora	J. M. Mott, M.D.	Lawrence
Edwards	W. P. Stoltzberg, M.D.	Kinsley	F. E. Dargatz, M.D.	Kinsley
Elk	R. C. Harner, M.D.	Howard	F. L. Depew, M.D.	Howard
Finney	Sanford Bailey, M.D.	Garden City	H. C. Sartorius, M.D.	Garden City
Ford	C. E. Bandy, M.D.	Bucklin	R. E. Speirs, M.D.	Dodge City
Franklin	J. F. Barr, M.D.	Ottawa	F. A. Trump, M.D.	Ottawa
Geary	W. A. Smiley, M.D.	Junction City	L. S. Steadman, M.D.	Junction City
Harper	L. C. Joslin, M.D.	Harper	P. G. Miller, M.D.	Anthony
Harvey	E. M. Harms, M.D.	Newton	J. A. Grove, M.D.	Newton
Jackson	F. C. Moser, M.D.	Holton	Roy Moser, M.D.	Holton
Jefferson	J. M. Marks, M.D.	Valley Falls	D. M. Stevens, M.D.	Oskaloosa
Jewell	J. E. Hawley, M.D.	Burr Oak	C. W. Inge, M.D.	Formoso
Johnson	D. E. Bronson, M.D.	Olathe	R. R. Becker, M.D.	Spring Hill
Kingman	Ferd Burnett, M.D.	Cunningham	H. E. Haskins, M.D.	Kingman
Kiowa	C. D. Updegraff, M.D.	Greensburg	W. Errol Wilson, M.D.	Greensburg
Labette	L. A. Proctor, M.D.	Parsons	O. E. Stevenson, M.D.	Parsons
Leavenworth	R. S. McKee, M.D.	Leavenworth	W. L. Pratt, M.D.	Leavenworth
Lincoln	B. A. Higgins, M.D.	Sylvan Grove	W. G. Emery, M.D.	Barnard
Linn	J. R. Shumway, M.D.	Pleasanton	David E. Green, M.D.	Pleasanton
Lyon	C. C. Underwood, M.D.	Emporia	C. H. Munger, M.D.	Emporia
McPherson	Guy Finkle, M.D.	McPherson	A. M. Lohrenz, M.D.	McPherson
Marion	A. C. Eitzen, M.D.	Hillsboro	R. R. Melton, M.D.	Marion
Marshall	Henry Haerle, M.D.	Marysville	Thomas T. Myers, M.D.	Marysville
Meade-Seward	L. G. Blackmer, M.D.	Hooker, Okla.	R. J. Drake, M.D.	Hugoton
Miami	O. C. Lowe, M.D.	Paola	William Brown, M.D.	Paola
Mitchell	H. B. Vallette, M.D.	Beloit	H. L. Collins, M.D.	Beloit
Montgomery	A. Boese, M.D.	Coffeyville	H. O. Bullock, M.D.	Independence
Nemaha	S. M. Meyers, M.D.	Corning	F. E. Wrightman, M.D.	Sabetha
Neosho	J. F. Edwards, M.D.	Chanute	G. L. Ashley, M.D.	Chanute
Northwest	J. L. Bowen, M.D.	Colby	George Marshall, M.D.	Colby
Osage	H. J. Jensen, M.D.	Lyndon	F. M. Smith, M.D.	Lyndon
Osborne	W. W. Miller, M.D.	Osborne	J. E. Henshall, M.D.	Osborne
Pawnee	Charles Starr, M.D.	Larned	C. E. Sheppard, M.D.	Larned
Pottawatomie	J. A. Hanks, M.D.	Wamego	L. W. Cozier	Wamego
Pratt	Herbert Atkins, M.D.	Pratt	Athol Cochran, M.D.	Pratt
Reno	J. J. Brownlee, M.D.	Hutchinson	C. A. Boyd, M.D.	Hutchinson
Republic	C. V. Haggman, M.D.	Scandia	Paul L. Beiderwell, M.D.	Belleville
Rice	Geo. Meek, M.D.	Little River	A. A. Sprong, M.D.	Sterling
Riley			O. M. Heiberg, M.D.	Manhattan
Rush-Ness	J. E. Attwood, M.D.	La Crosse	D. B. Parker, M.D.	Ransom
Saline	Leo Schaefer, M.D.	Salina	George E. Stafford, M.D.	Salina
Sedgwick	R. A. West, M.D.	Wichita	George Gsell, M.D.	Wichita
Shawnee	W. K. Hobart, M.D.	Topeka	F. C. Taggart, M.D.	Topeka
Smith	A. Jeffers, M.D.	Smith Center	V. E. Watts, M.D.	Smith Center
Stafford	C. S. Adams, M.D.	St. Johns	L. G. Graves, M.D.	St. John
Sumner	A. R. Hatcher, M.D.	Wellington	J. Allen Howell, M.D.	Wellington
Wabaunsee	C. L. Youngman, M.D.	Harveyville	L. M. Tomlinson, M.D.	Harveyville
Washington	D. A. Bitzer, M.D.	Washington	F. H. Rhoades, M.D.	Hanover
Wilson	Lynn E. Beal, M.D.	Fredonia	E. C. Duncan, M.D.	Fredonia
Woodson	C. A. Dings, M.D.	Yates Center	H. A. West, M.D.	Yates Center
Wyandotte	F. E. Angle, M.D.	Kansas City	P. E. Hiebert, M.D.	Kansas City

OFFICIAL REPRESENTATIVES

COUNTY	OFFICIAL REPRESENTATIVE	ADDRESS	COUNTY	OFFICIAL REPRESENTATIVE	ADDRESS
Chase	Jacob Hinden, M.D.	Strong City	Morris	C. C. Kerr, M.D.	Council Grove
Cheyenne	J. H. A. Peck, M.D.	St. Francis	Morton	F. H. Buckmaster, M.D.	Elkhart
Clark	I. R. Barker, M.D.	Ashland	Norton	Walter Stephenson, M.D.	Norton
Decatur	F. W. Brewster, M.D.	Oberlin	Ottawa	C. D. Vermillion, M.D.	Tescott
Ellis	O. A. Hennerich, M.D.	Hays	Phillips	J. L. Shewmaker, M.D.	Phillipsburg
Ellsworth	Alfred O'Donnell, M.D.	Ellsworth	Rawlins	G. A. Leslie, M.D.	McDonald
Gove	B. S. Morris, M.D.	Quinter	Rooks	F. E. Richmond, M.D.	Stockton
Graham	I. B. Parker, M.D.	Hill City	Russell	F. S. Hawes, M.D.	Russell
Grant	J. H. Miller, M.D.	Ulysses	Scott	W. R. Kippenberger, M.D.	Scott City
Gray	R. W. Spearing, M.D.	Cimarron	Sheridan	G. W. Hammel, M.D.	Hoxie
Greeley	J. D. Wilson, M.D.	Tribune	Sherman	M. J. Renner, M.D.	Goodland
Hamilton	Charles F. Harrison, M.D.	Syracuse	Stanton	John Allen, M.D.	Johnson
Haskell	J. B. Ungles, M.D.	Satanta	Stevens	W. R. Kenoyer, M.D.	Hugoton
Hodgeman	C. B. Wycoff, M.D.	Jetmore	Thomas	James L. Jensen, M.D.	Colby
Kearney	G. R. Hastings, M.D.	Lakin	Trego	W. Y. Herrick, M.D.	Wakeeney
Lane	E. P. Deal, M.D.	Dighton	Wallace	Hugo E. Nelson, M.D.	Sharon Springs
Logan	W. F. Deal, M.D.	Oakley	Wichita	L. S. Ort, M.D.	Leoti

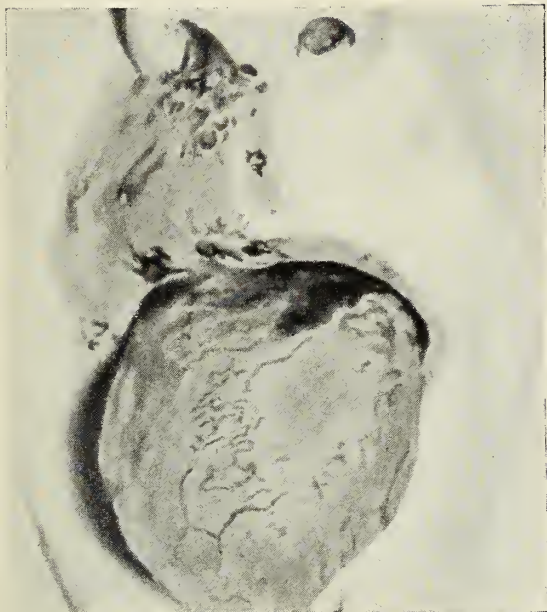
STUDIES IN THE AVITAMINOSES



This page is the tenth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the September 14 issue of The Journal of the American Medical Association.

The Glossitis of PELLAGRA

The glossitis of pellagra is usually among the early symptoms. It is manifested initially by hyperesthesia, which frequently develops before objective signs. As the deficiency state becomes more pronounced, desquamation of the superficial epithelium gives the tongue a beefy red, smooth, dry appearance. During desquamation, secondary infection with Vincent's organisms or *Monilia* frequently occurs, producing a thick white or yellow coating which ultimately is shed. The tongue becomes swollen, and fissures and aphthous ulcers develop on its surface. The inflammatory process spreads to the buccal mucosa, the gums, the lips and the pharynx, producing superficial ulcerations in these areas.



Photograph courtesy of C. P. Rhoads, M. D., Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City.

The Dermatitis of PELLAGRA

The skin lesions of pellagra are considered one of the diagnostic signs; they are seen on the hands, neck, under the breasts, on the perineum, and on the legs. They usually are bilateral and are sharply demarcated from the surrounding normal skin. At first the involved area becomes erythematous and tender, resembling a mild sunburn. The skin is tense and swollen; itching and burning may be severe. At this stage vesicles or bullae frequently appear. After a period of weeks or months, the edema subsides, the erythema disappears, and the involved skin may assume a more normal appearance. Residual pigmentation persists, however, especially about the hair follicles.



Illustration courtesy of Henry Field, Jr., University of Michigan Medical School, Ann Arbor.

NEW DRUGS

that are not new

New therapeutic agents marketed under the Lilly label are not new to their maker. Products of the Lilly Laboratories have always had a substantial background of laboratory and clinical study before being released for general use.



ILETIN (INSULIN, LILLY)

an aqueous solution of the antidiabetic principle, was the first preparation of Insulin commercially available in the United States.

Years of research and experience in the manufacture of large lots of

Iletin (Insulin, Lilly) assure its purity,

stability, and uniform potency.



ELI LILLY AND COMPANY

PRINCIPAL OFFICES AND LABORATORIES • INDIANAPOLIS, INDIANA, U. S. A.

THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

OCTOBER, 1940

Number 11

THE ROLE OF SURGERY IN PAINFUL FEET*

Earl D. McBride, M.D.

Oklahoma City, Oklahoma

There are several characteristic painful and incapacitating conditions of the toes and foot which respond singularly to surgical relief. Usually such disabilities develop slowly over a period of years due to congenital imperfections, systemic influences and habitual abuse of the feet in shoes. The sufferer often continues to tolerate the discomfort and inconvenience because of failure to seek competent advice or because of fear of the results of surgery when it is recommended. The prominent commercial display of pads, ointments and appliances on the counter of drug stores, shoe stores, or ten cent stores, and the widely heralded claims of numerous styles of arch support shoes are indicative of the source from which the foot sufferer usually seeks relief.

Some intervening circumstance may finally cause sufficient pain, inflammation or distress to compel submission of the foot sufferer to medical consultation. Unfortunately the medical profession remains apathetic. The humble subject of foot disabilities has not attracted so much interest as the more pre-eminent maladies of the body. Operations on the foot are often those in the classification of minor surgery but from the standpoint of gratifying results, major surgery is of no greater consequence. The secret of success, however, is a thorough understanding of the foot and its peculiarities. The operative procedure not only must fulfill surgical requirements but must meet the patient's expectation as to recovery from pain and distress, together with cosmetic improvement. Expedience must not overshadow sound judgment. An overlapped, painful little toe or an aggravating hammer toe, for instance, would seem more quickly relieved by amputation but more miserable symptoms often follow such procedure.

In most of the procedures on the foot local an-

esthetic of two per cent novocaine is preferable. For the bunion operation or calcaneal spurs, spinal or general anesthetic may be desired. A tourniquet is usually essential. Most patients withstand the constriction well when local anesthesia is used. A Martin bandage is smoothly rolled from the foot upward to above the ankle. It should hardly be necessary to warn that strict caution should be used to operate on feet with circulatory disturbances. Discussion here will be limited to nine of the more distressful disturbances.



FIG. 1A

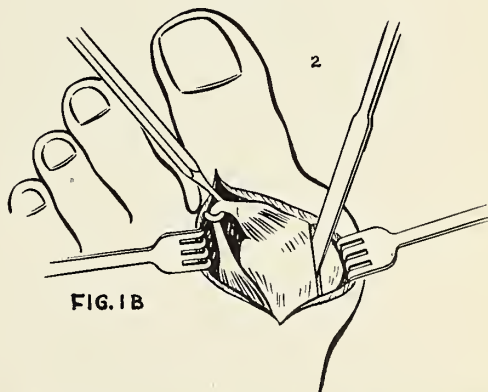


FIG. 1B

Fig. 1. A. Hallux valgus deformity of great toe. B. Adductor tendon which is released from phalanx and transplanted to first metatarsal head.

BUNIONS—HALLUX VALGUS DEFORMITY

The development of a painful callused bursa over the medial head of the first metatarsal bone, together with the valgus deformity of the great toe is commonly termed "bunion." The deformity is unsightly and the disabling symptoms often exasperat-

*Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 15, 1940.

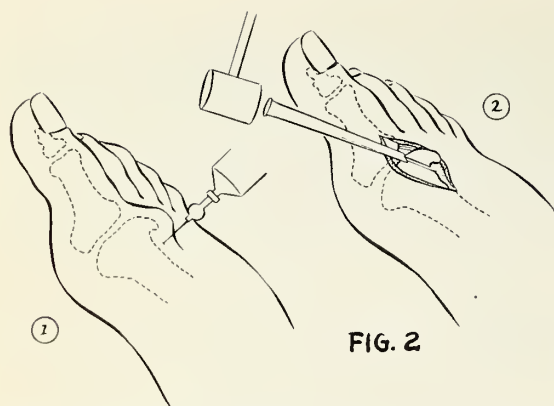


Fig. 2. Exostosis on the metatarsal head associated with hallux rigidus.

ing. There are more than fifty different surgical procedures described for this condition, which is indicative that satisfaction in surgical technique is difficult to obtain. Several types of operations are mutilating to the contour of the toe and destructive of dependency on the ball of the toe in walking. The frequency of unfavorable results has caused great apprehension in respect to the success of surgery in the treatment of bunions. The operative procedure must be one that not only fulfills surgical requirements of correction of deformity, but the cosmetic effect and relief of pain must fulfill the patient's expectations.

For several years the writer has been advocating a procedure that is conservative in that the weight bearing head of the first metatarsal or its corresponding phalanx are not excised or fractured to secure correction.¹ Instead the forces of tendon action on the great toe are reconstructed. The adductor hallucis tendon which draws the toe in valgus is loosened from its attachment to the phalanx and reattached to the metatarsal shaft. The lateral sesamoid is usually removed in this procedure. The abductor hallucis tendon is tightened by resuturing after excising a section through the bursa over the bunion prominence.

A light plaster spica is applied to the toe and forefoot and at the end of about one week the patient may begin to bear weight. The cast is removed in two weeks, the stitches extracted and the toe strapped in the corrected position by adhesive. The toe of the shoe is cut out and the patient allowed to resume activity. The technic of the operation is too exacting to describe in detail here and reference is made to previous descriptions.

HALLUX RIGIDUS

The base of the great toe is often the site of severe soreness and pain. Partial or complete ankylosis may gradually take place. Irregular growths of

exostosi or gouty deposits surround the first metatarsal head and base of the proximal phalanx involving the articular margins, the sesamoid bones and tendons. Pain is aggravated through dorsiflexion of the toe in walking or dancing.

Surgical removal of the exostosi and remodeling the joint is sufficient in simple cases. Where motion is greatly limited, however, more radical measures are necessary. Preservation of motion may be attempted through the Keller method of excising the base of the proximal phalanx or other arthroplasty procedures. Arthrodesis of the joint with the toe fixed at an angle of fifteen degrees dorsiflexion is usually very satisfactory.

HAMMER TOE

Hammer toe with the corn like bursa on its dorsal apex rasping against the toe of the shoe and the calloused tip of the digit, cramped against the sole, is often a serious disability; it may be of congenital origin or acquired. The lateral ligaments and glenoid ligament are rigidly contracted so that neither tenotomy nor forcible stretching or splinting is sufficient to overcome the deformity.

The only successful treatment is that of excision of the proximal interphalangeal joint. Amputation is a serious error when treating the second toe, because it will permit hallux valgus deformity of the big toe. Through an oval incision the articular mar-

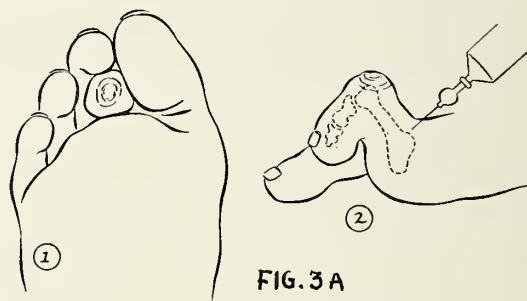


FIG. 3A

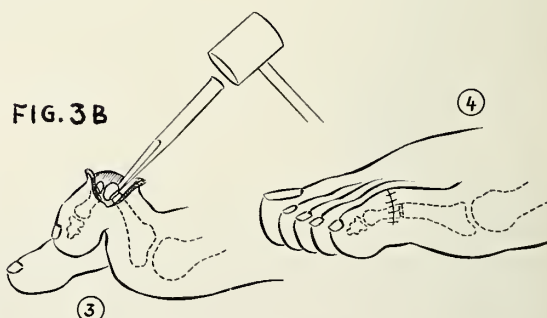


Fig. 3. A. Hammer toe treated by fusion of the articulation. B. Painful corns resulting from hammer toe.

gins are excised sufficiently to permit easy straightening of the toe. The flexor tendon is divided and the toe splinted in extension for two or three weeks, to secure ankylosis of the excised joint².

PAINFUL CALLUS ON SOLES OF THE FOOT

A painful callus frequently is formed on the sole of the foot underlying one or more of the metatarsal heads. They are caused by irritation from the shoe over a prominent weight bearing point. The origin is sometimes from a wart. When extremely painful the simple callosity has developed beneath it a bursa which can usually be relieved only by excision. In severe cases where the corresponding metatarsal head is greatly depressed or deformed it must, also, be excised.

The callus is excised by elliptical incision. The skin edges are drawn firmly together by undermining and protected from weight bearing or irritation for at least two weeks. In severe cases the incision may be made along the anterior border of the foot under the toes and a plastic shifting of the metatarsal sole accomplished through undermining a large area of skin and fascia. A metatarsal support is usually advisable for several months after the operation to prevent relapse.

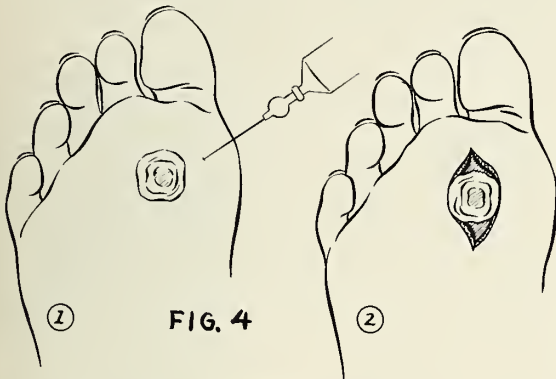


Fig. 4. Painful callus treated by excision.

OVER RIDING TOE

The riding of one toe over or under the other is a common congenital deformity. Usually the little toe is the offender but the other toes are not infrequently involved. Painful corns and calluses about the side, dorsum or tip of the toe produce distress in walking or dancing. In the little toe the deformity is often due to dislocation of the metatarsophalangeal joint. In many instances the head of the fifth metatarsal is spread away from the fourth metatarsal causing a bunion type of callused bursa on its lateral prominence.

Surgical realignment of the phalanges in the little toe may be accomplished by excision of the metatarsal head. In some cases plastic shifting of the skin

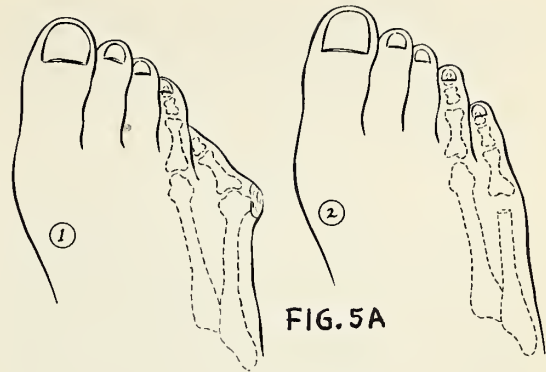


FIG. 5A

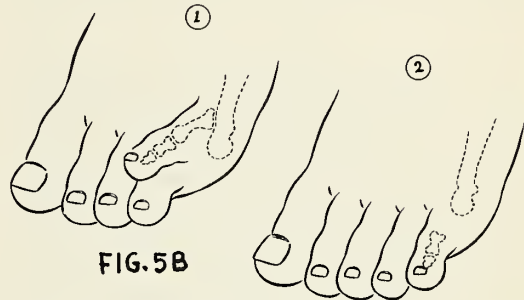


FIG. 5B

Fig. 5. Over riding little toe. A. Treated by excision of metatarsal head. B. Removal of entire phalanx.

and fascia are necessary as well. In the other toes excision of an articulation as in hammer toe will correct the deformity. Firm splinting with a small unpadded plaster casing moulded about the parts will maintain the corrected position.

METATARSALGIA

Metatarsalgia is usually manifested by a cramp like, sickening pain about one of the metatarsal heads, usually that of the fourth toe. When conservative measures of shoe correction, metatarsal support and exercises persistently fail, surgical excision of the metatarsal head will render great satisfaction.

Incision may be made upon the dorsum of the foot, the metatarsal cut through its neck and head dissected from its bed. Incision may also be made

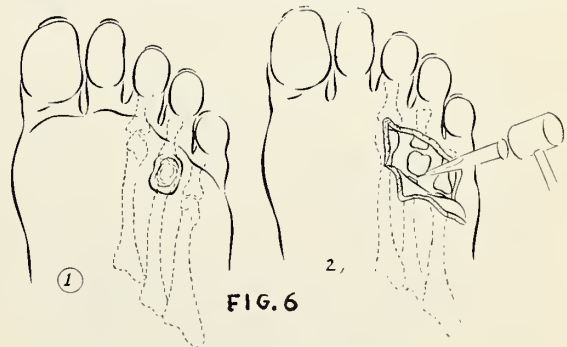


FIG. 6

Fig. 6. Metatarsalgia. Excision metatarsal head with plastic shifting of callused sole.

on the sole of the foot but never over the weight bearing surface. The line should follow the curve of the metatarsal pad under the toes, long enough for the skin and fascia to be lifted up to expose the metatarsal head and neck.

BUNION ON FIFTH METATARSAL (Tailors Bunion)

Prominence of the fifth metatarsal head often is the cause of a painful callused bursa similar to a bunion on the first toe. Simple excision of the bursa and bony prominence is usually sufficient for relief; two per cent novocaine anesthetic is used. The head of the metatarsal is excised where it is deformed or too greatly spread away from the fourth metatarsal.

CORNS

Corns are due to hypertrophy of the skin papillae, one or more of which become enlarged and form a center or core. They become painful because of irritation of nerve endings in the subjacent papillae and the formation of a small bursa. When the growth occurs between the toes where moisture exists it is called soft corn. The hard corn usually appears over a bony prominence on the dorsum of the toe due to friction of the shoe. The soft corn more commonly occurs between the fourth and fifth toes where the toes are squeezed together against the prominence of the base or head of the phalanx; careless picking or trimming of the corn may cause infection followed by cellulitis and produce serious disability.

Excision of the hard corn through an elliptical incision is of value where there is a well developed bursal sac formed beneath the callus. Relapse of the callus is common, however, unless the area is well protected.

In extreme cases excision of the underlying prominence of bone or the entire head of the phalanx may be resorted to with satisfactory results.

One of the most satisfactory operations on the foot is that for the cure of soft corn. The writer has been using the following procedure for the past

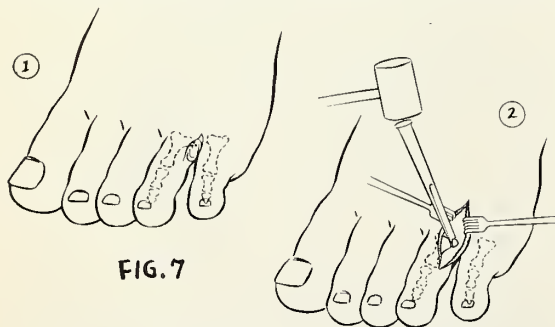


Fig. 7. Painful soft corn. Excision of phalangeal base.

twenty years. Linear incision is made along the dorsal margin of the toe. The corn is not excised; the web should not be cut. Where the corn is at the base of the toe the incision is extended upward enough to expose the base of the phalanx and the corn of the offending phalangeal prominence is excised with a small thin chisel or bone nippers. No small bit of loose bone or bony projection should be left. Weight bearing is permitted within a shoe in two or three days, unless there is evidence of infection or cellulitis.

PAINFUL HEEL

Pain due to bursitis may occur at the tip end of the heel or at its weight bearing point on the sole. The bursitis is often followed by bony deposits and spurs which persist as a very disabling affection. When conservative means fail surgery is indicated.

Excision of the bursa and spur growth is permanently relieving provided there is no tendency toward progressive arthritic changes in the foot.

Incision is made along the inner border of the heel and the bursa and spur is destroyed by curette or chisel. Weight bearing is permitted with the heel protected in about two weeks. There is usually a complaint of numbness for several weeks. Attention should be given to the support of the arch and proper shoes.

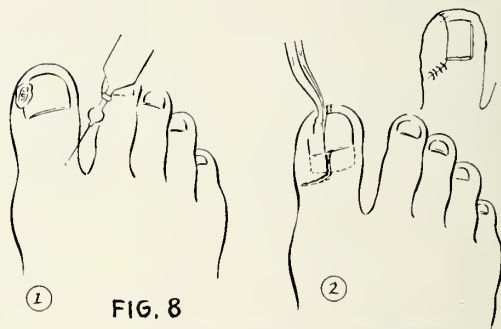


Fig. 8. Ingrown toe nail treated by excision of part of nail, its matrix and all soft parts beneath.

INGROWN TOE NAIL

Infections about the toe nails frequently become serious. The common ingrown nail is usually painful because frequent trimming produces inflammation and ulceration. Removal of the entire nail is not wise if it can be avoided. Excision of a fourth of the nail together with the matrix and entire thickness of the soft parts is the operation of choice. The skin flap is then sutured back into place alongside the nail.

SUMMARY

Surgical relief of certain painful conditions of the feet often renders quick and permanently satisfac-

tory results if properly selected. Nine procedures are described but there are still other indications for surgery if space would permit description.

BIBLIOGRAPHY

1. McBride, Earl D.: A Conservative Operation for Bunions, *J. Bone & Joint Surg.* 10:735 (Oct.) 1928.
- McBride, Earl D.: The Conservative Operation for Bunions: End Results and Refinements of Technique. *Jr. A.M.A.* Oct. 12, 1935, Vol. 105, p. 1164-1168.

A CLINICAL APPROACH TO THE MIGRAINE PROBLEM*

PART I

GENERAL CONSIDERATION AND DATA

D. V. Conwell, M.D.

C. J. Kurth, M.D.

Halstead, Kansas

Migraine is described as a nervous affection marked by periodic headaches, usually hemicranial, typically early morning and accompanied by nausea, vomiting and various sensory disturbances. It is one of our common diseases. It is one of the commonest hereditary diseases. The tendency is inherited. The attacks are precipitated by developmental errors, by extenuating circumstances or by unrealized living faults. Since the individual is born vulnerable to migraine, these deviations from the normal need be but slight as compared to the normal to precipitate the attacks. There are many causes and kinds of headaches. Organic diseases may produce headaches identical in character with migraine. These are pseudomigraine or migrainoid headaches. They are terminated if the underlying disease process can be corrected. The common causes of migrainoid headaches are generally recognized and treated. Some of these factors are obvious. Others require an exhaustive examination to reveal them. The elimination of migrainoid leaves a large group of patients who have migraine without apparent cause. Their condition is poorly understood. They are more apt to receive evasion and slurs, than consideration and relief. Their illness is real. Their disability cannot be contested.

Hereafter this consideration is confined to migraine. It seems to be a systemic condition and the outward expression a neuralgia involving chiefly the fifth cranial nerve. The pain seems to be due to a vasomotor disturbance. The causes still remain numerous and their action may be roughly compared to the trigger reaction of trifacial neuralgia. It is slower but just as certain. It is more like a time fuse. It is useless to consider here the occasional

attack victim. To date it is not worth his time or expense to investigate his trouble. Unless the migraine attacks occur oftener than once a month it is hardly worth while to investigate or treat them unless it is done in the course of the investigation and treatment of an associated condition. This report includes only those patients who have frequent and severe migraine.

From 1929 to 1939 we have observed and treated 376 patients with severe migraine. Their disability ranged from twenty to 100 per cent. Two hundred and seventy-six of them were hospitalized and 100 were observed and treated as out patients. The hospitalization range was from two days to eighteen months. The usual time of hospital observation was four days. Two hundred and ninety-seven of these patients were females and seventy-nine were males. The ratio of the females to males was about four to one. The youngest of the male patients was nine years and the oldest was seventy-four years. The average age of the male patients was 40.1 years when they first appeared for treatment. The youngest of the female patients was ten years, the oldest seventy-seven years and the average age thirty-nine years when they were first seen. Two hundred and sixty of these patients were housewives, thirty-three were students or teachers, thirty-nine were office workers, twenty-seven were farmers, seven were in professions and ten were laborers. Seventy-two per cent of these patients gave a family history of migraine. Thirty patients had severe migraine for less than one year, forty-three had severe attacks for years, twenty-eight gave no record as to time and seventy-one claimed severe migraine all their lives. The remainder had the headaches for an average of 9.43 years. The approximate average duration of the entire group was 13.9 years which made the average age of onset of the severe migraine at about the twenty-fifth year. Most of them had occasional headaches before the twenty-fifth year. Ninety-five of the patients had severe headaches, anorexia, nausea, vomiting and slight sensory disturbances. One hundred and forty-one had more severe sensory disturbances including vertigo. One hundred and forty had severe sensory symptoms including marked vertigo and visual difficulty. There were numerous instances of unconsciousness and mental depression or confusion. The ocular and the mental disturbances at times persisted for days or weeks after a series of particularly severe migraine attacks.

The physical and laboratory observations that we could make during the headaches differed little if any from those made between the attacks. The majority of the patients seemed to be normal physically and above average mentally. One hundred and

*Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 14, 1940.

sixteen of them were nervous enough to merit the associated diagnosis of psychoneurosis. More of them showed some evidence of nervousness. Nearly all of the patients had had refractions and many were wearing glasses without changing the course of the migraine. If the migraine attacks were frequent enough, an associated fatigue appeared and was accompanied by exophoria which was temporary but added an extra though transitory trigger to produce additional migraine attacks. Sixty-eight patients had nose, sinus, dental or gall bladder disease definite enough to warrant surgical or dental care. The migraine history antedated the appearance of these conditions. The surgical care at times helped the headaches, at times it did not alter the course of the migraine and at times the headaches were much worse after the operation. Therefore one must be cautious in promising a migraine patient relief from headaches in advising care of a co-existing condition that may seem to be a positive cause of the attack. It may be only a complementary factor. These conditions need surgical treatment but the surgeon can guard his prestige easier before the operation than he can afterwards by a clear preoperative understanding.

There seems to be some relationship between endocrine dysfunctions and migraine. As we became aware of this, we began to search for every sign or symptom that would indicate even a minor endocrine disturbance. A positive Chvostek's sign on twenty-five patients indicated an abnormal calcium-phosphorus balance. Nineteen of the patients had goitres and had thyroidectomies. Nine of these were toxic goitres and eight were interstitial goitres. This surgery temporarily added to their headaches and did not change the course of the migraine. Thirty-seven of the patients were obese, their hair and skin tended to be dry and the subcutaneous fat was very firm. They had bradycardia and hypotension. They had myxoedema even though the signs were not typical. Eight patients had polyglandular dystrophy led by pituitary hypofunction. They were obese. Their hair was fine and their subcutaneous fat was flabby. The pulse and blood pressure readings were normal. The males had underdeveloped genitalia and the females were inclined to menorrhagia and metrorrhagia. Females of normal configuration frequently reported menstrual disturbances. Seventeen females were castrates and sixty-five were in or past the menopause.

A review of our laboratory data shows some findings that have been important and some that to date have been valueless. Usually the routine urinalysis showed nothing of importance. Phosphaturia was the most common finding. Glycosuria was rare except during a glucose tolerance test when sugar

in the urine was a frequent finding at the peak of the curve. None of the patients had diabetes mellitus. A few had a family history of diabetes. A mild secondary anemia was not uncommon. Eosinophilia was frequently observed. A definite and severe secondary anemia was found in thirty-four patients. One of these patients died from starvation a few hours after admission to the hospital. She was a spinster sixty-six years of age who had endured migraine for fifty years. She found that some foods caused her headaches. She was treated for allergy and stomach ulcers. Her diet was eventually limited to celery soup, chicken broth and barley gruel. Her blood count showed a hemoglobin of eighteen per cent and a red cell count of 1,500,000. The gastric analysis on twenty-four patients showed a hyperchlorhydria in nineteen instances and five had no free acid. Routine blood Wassermanns were negative. We have never found abnormal spinal fluid findings in migraine. Fasting blood sugar determinations were made on 130 patients. Considering a reading of eighty to 120 mg. as normal, thirty-two readings were below normal, eighty-six were normal and twelve indicated hyperglycemia. This was in contrast to the findings of the glucose tolerance curves made on 107 patients. Ten of these curves were flat, twenty-one were normal and seventy-six showed high and often prolonged curves. The high curves often showed marked variations in the location of the peak and the contour of the curve. Serum blood calcium determinations were made on eighty-four patients. The normal range was 9.5 to 11.5 mg. per 100 c.c. of sera. Twenty-eight of these readings were below normal, fifty-one were normal and five showed a calcium level above normal. Phosphorus determinations made on the sera of these same patients showed less deviations from the normal. The phosphorus reading tended to be above normal in the presence of a subnormal calcium level and low if a hypercalcemia was present. Basal metabolism rates on sixty-five patients were normal in thirty-three instances, twenty-three were below and nine were above normal. The lateral x-ray films of the skulls of 128 patients usually showed normal findings. A small sella tursica was found eleven times. Several of the films seemed to show calvarium density and depth less or greater than normal. At times this finding seemed linked with a calcium-phosphorus metabolism disturbance. The sodium benzoate or hippuric acid test for liver function was normal on three patients. The twenty-four hour urine creatine and creatinine excretions were normal on eight patients. The skin or elimination diet tests or both for allergy on 123 patients were positive in eight instances.

Viewing these patients from these different an-

gles, few of them failed to show some deviation from normal. The faults were minor and usually metabolic or endocrine in character. They could be readily dismissed as inconsequential. We frequently see the same deviations from normal in non-migraine patients without being able to give such findings a value. But we are not dealing with normal neuro-endocrine constitutions whose metabolic mechanism can sway without penalty. We are considering an organism that is as vulnerable to these minor changes as the upper respiratory tract of the hay fever patients is sensitive to the pollen that we all breathe.

COMMENT

Migraine is a common disease. It varies markedly in its course and cause from migrainoid. Migraine is probably a metabolic disease. Surgery on the migraine patient may do more harm than good. This is particularly true of pelvic surgery that involves castration of the female. Biochemical faults may be found in migraine patients. Since they are vulnerable to even minor changes, a critical evaluation of these findings should give us a better insight into their problems.

PART II

PREVENTIVE TREATMENT

D. V. Conwell, M.D.

Halstead, Kansas

The ideal treatment for migraine is one that will either eliminate the attacks or decrease their number and intensity to the point where the individual's existence is not handicapped by too frequent episodes of invalidism. If it is to be of value, the preventive therapy must be simple, convenient, inexpensive, safe and must offer a reasonable chance for improvement. With these points in mind and with a full realization of the multiple possible factors in the etiology of migraine, an effort was made by clinical observation and literature study to find the commonest denominators in migraine attacks. We had previously eliminated migrainoid.

From 1929 to 1939 we have observed, treated and followed 328 patients with severe migraine for a period of a year or more. In this series of patients the commonest factors were nervousness, inability to normally handle high carbohydrate foods, constipation, anemia and occult endocrine dysfunctions. All of these conditions influence metabolism. A more or less common metabolic fault provoked by these factors was assumed to be the most frequent cause of the vasomotor disturbance leading to the headaches. Elimination of nervousness, anemia and constipation has helped only a few patients with severe migraine, so these elements were considered

minor and complementary. The influence of high carbohydrate foods and of occult endocrine dysfunctions were assumed to be the major factors.

An effort was made to use the ketogenic diet. Few patients would follow this diet and fewer liked it. All were willing to adhere to a low carbohydrate diet and some gradually contributed to it. This diet seemed especially helpful to the patients who had vertigo associated with the headaches. Practically all patients digressed from this diet soon after they had definite relief, but most of them returned to its spontaneously if their headaches returned. A laborer was allowed a larger amount of the starches limited in items numbers six and nine. After a year of freedom from attacks any patient was allowed to add more starches and later items from number twelve to his diet. Comparison of the results obtained with different diets is shown in table 1 A. The results with the allergic diets were far worse than it appears, as protein sensitization tests were made or elimination diets were used on all of the patients listed in the unimproved and improved columns of table 1. When protein sensitization is present, the elimination of the offending food is very helpful. In these patients wheat and egg were the chief offenders. The incidence of allergy in this series was so small that it certainly was a very minor factor. Consequently the low carbohydrate diet soon became our first therapeutic move in the prevention of migraine. Other needed medicinal or endocrine therapeutic measures were employed as they were indicated.

The results of this approach to the migraine problem are analyzed in table 1. Eighty-one per cent of these patients used the low carbohydrate diet which hereafter will be referred to as the migraine diet. Thirty-seven per cent of the patients that used this diet had complete remission and have been able to stop all treatment including the diet without return of their headaches. Thirty-two per cent have improved and have discontinued accessory medications but are limited in their ability to violate the migraine diet without penalty. Twenty-five per cent have to use the diet continuously and employ their other therapeutic measures at the times of the minor crises of average living conditions. The attacks were unimproved in six per cent of the patients using the migraine diet. They were unchanged in practically the same number of patients using all of the other diets, table 1 B., although the total number of individuals using these other diets was sixty-three or nineteen per cent of the entire series.

The commonest medicinal agents employed were sodium bromide, luminal, salicylates, iron, cascara and magnesium oxide. These were used alone or in different combinations for weeks or months according to the needs. Many of the severe migraine group

were so dominated by their attacks that they became hysterical and required sedatives to tide them through the first few weeks of treatment. Sodium bromide or luminal was given to 293 of these patients. Salicylates were given before meals to 134 patients who had clinical or laboratory evidence of low gastric acidity or achlorhydria and who could get some protection from the attacks by their use. Seventy-two patients were given magnesium oxide if evidence of hyperchlorhydria and constipation was present. Almost an equal number used cascara for constipation. Iron was given if even a slight grade of secondary anemia was found. Insulin in small doses was tried but proved valueless except for the occasional complication of exhaustive psychosis. Ergotamine tartrate in small doses by hypodermic injection was the most certain agent for relief of the individual attack.

Correction of endocrine imbalance, at times obvious but usually atypical and occult, was of definite value in the treatment of 100 or thirty per cent of these patients (table 2). They had hypothyroidism, artificial or normal menopause, a disturbed pituitary-ovarian balance or a subnormal blood serum calcium level. The latter may have been due to either hypoparathyroidism or to a vitamin D deficiency.

Thirty-seven or eleven per cent of these patients (table 2) were phlegmatic and over weight. They had thick, firm subcutaneous fat, bradycardia and hypotension. Their hair was usually dry and brittle and their skin was normal or slightly dry. U.S.P. thyroid sicca was added to their treatment and was increased slowly. Some of these patients readily tolerated fifteen grains a day. Ninety-seven per cent of this group improved and eighty-four per cent of the remissions were of the better grades. Some of the thirty-one patients who attained the better grades of improvement have been able gradually to reduce the dose of thyroid and finally to eliminate its use.

The estrogenic substance was given to thirty-four of the females who had oligomenorrhea or amenorrhea, the former without apparent cause and the latter from roentgen or radium therapy, castration or the climacteric. The idea is prevalent that at the menopause migraine disappears. That is a part truth. Ninety-one of these patients had reached or passed their fiftieth year. It is peculiar that an artificial menopause from the use of roentgen or radium therapy at times stops migraine. In these patients some ovarian activity must persist. The headaches return with resumption of menstruation. If ovarian function is eliminated by too strenuous roentgen or radium therapy or by oophorectomy, the migraine attacks usually get worse. The response of this group of patients to the estrogenic substance has

been excellent. Sixteen or forty-seven per cent of these patients have had improvement of their migraine and seventeen or fifty per cent of them have had complete remissions. This substance is particularly helpful to the castrate. Its use can be controlled best by data on the menses or on the symptoms due to peripheral neurocirculatory instability. The hormone may be needed for a few or for many months.

If there was a disturbance of the pituitary ovarian balance and the menses were profuse, the use of the anterior pituitary-like substance at times was helpful. It was given to eight patients. Three of them (table 2) had complete relief from their headaches, two of them were greatly improved, one was improved and two had no change in the course of their migraine. The maximum amount used was ten c.c. a month for three months followed by six c.c. a month for five months. The therapy was moderated if the menstrual pains increased or if oligomenorrhea appeared.

A subnormal blood serum calcium level was found in twenty-one or six per cent of the entire series (table 2). To correct this condition calcium was given. Vitamin D or parathyroid extract was used according to the indications which are to date elastic. Two-thirds of these twenty-one patients had very satisfactory improvement of their migraine. There was one failure.

The provocation of migraine attacks by excitement, stress and strain was difficult to avoid. These were factors in many of the patients and I know of no methods of control other than to have the patients avoid these critical areas as much as possible and to subdue their neuro-adrenal instability with sedatives.

As the investigation of the migraine problem progressed, the preventive treatment gradually became a routine. The patient was instructed in the use of the migraine diet. Sedatives were frequently prescribed and if necessary salicylates, iron and anti-constipation measures were employed. If this regime did not control the attacks in a reasonable length of time, a search was made for an endocrine element or for protein sensitivity and even minor and atypical indications of the presence of these factors were considered and treated.

By approaching the migraine problem in this manner 208 (sixty-four per cent) of these patients have been relieved or improved to the point where they are satisfied and are living a reasonably normal life. The ninety-three (twenty-nine per cent) patients who have improved but who must follow treatment steadily and the twenty-seven (eight per cent) patients who have not improved still constitute a problem for future study.

LOW CARBOHYDRATE OR MIGRAINE DIET

Foods to use:

1. Soups: Meat broths or cream soups made without added thickening.
2. Meats: All kinds and cuts of meat; beef, lamb, veal, pork, liver, chicken and sea food.
3. Eggs: In any form as desired; boiled, poached, hard cooked, scrambled or fried.
4. Cheese: Any kind as desired.
5. Cereals: Any cereals, either cooked or dry if not forbidden in number twelve.
6. Vegetables: All vegetables as desired except only one small serving of potatoes, corn, dried beans or parsnips in a day and items forbidden in number twelve.
7. Fruits: Three servings a day of any fresh fruit or fruit that has been canned in water and not forbidden in number twelve.
8. Beverages: Tea, coffee, milk or buttermilk. Fresh fruit juice or canned that has no added sugar.
9. Bread: Three slices a day of any kind; white, graham, rye, toast or crackers.
10. Desserts: The fruit that was mentioned above and occasionally a serving of custard.
11. Milk, butter and cream; use as desired.
12. Avoid the following foods: Sugar at the table; candy; jellies; jam; marmalades; pie; cake; cookies; sweet rolls; coffee cake; honey; molasses; syrups; dried fruits; cocoa; chocolate; puddings; ice cream; fountain drinks; sweet potatoes; grapes; bananas; watermelon; cantaloupe; rice; macaroni; noodles; hot bread; muffins; tapioca or any other thing that is definitely sweetened.

TABLE 1. RESULTS ACCORDING TO DIET USED

Diet	A				Total
	Complete Remission	Much Improved	Im-proved	Un-improved	
Low carbohydrate..	97	85	69	14	265
General	9	9	17	9	44
Smooth	2	1	4	2	9
High caloric	1	0	1	....	2
Low protein	0	1	1	1	3
Allergic	1	2	1	1	5
	110	98	93	27	328
Diet	B				Total
	Complete Remission	Much Improved	Im-proved	Un-improved	
Low carbohydrate..	97	85	69	14	265
All other	13	13	24	13	63
	110	98	93	27	328

Complete Remission: No headaches. Therapy including diet unnecessary.

Much Improved: No or occasional headache. Medication unnecessary. Some dietary restrictions.

Improved: Headaches less frequent and less severe. Must follow diet strictly and continuously. Accessory therapy at least intermittent.

Unimproved: No therapeutic measure has prevented the attack.

TABLE 2. RESULTS ACCORDING TO ACCESSORY ENDOCRINE THERAPY USED

	Complete Remission	Much Improved	Im-proved	Un-improved	Total
U.S.P. Thyroid Sicca....	13	18	5	1	37
Estrogenic substance	17	11	5	1	34
Calcium deficiency.....	8	6	6	1	21
Anterior pituitary like substance	3	2	1	2	8
	41	37	17	5	100

TUBERCULOSIS CASE-FINDING IN UNIVERSITY OF KANSAS STUDENTS*

Ralph I. Canuteson, M.D.**

Lawrence, Kansas

It is unnecessary to review the medical literature in support of the value of the tuberculin test followed by the x-ray in tuberculosis case-finding. For those who wish to consult references, the annual report of the Tuberculosis Committee of the American Student Health Association published each year in the *Journal-Lancet* presents the most concise results of surveys of large numbers of apparently healthy young persons from all parts of the United States. In schools having well developed case-finding programs the diagnosis of active tuberculosis occurs twenty times as often as in schools where the diagnosis depends upon the presentation of clinical symptoms alone¹.

The accuracy of the tuberculin test depends upon uniform administration and a reliable testing material, either the Old Tuberculin from a standard source or preferably, because of uniform potency and lack of sensitization to it, the Purified Protein Derivative. The method of administration of choice, based on accuracy of dosage, is the intradermal injection, or Mantoux method. The von Pirquet and patch tests have in their favor only ease of administration and less discomfort for the patient.

The size of the dose of tuberculin has been well standardized. If the Old Tuberculin is used the dosage should be carried to a maximum of 1.0 mgm. to isolate significant positive reactors. The recommended dosage of the Purified Protein Derivative is 0.000,02 mgm. for the first dose and 0.005 mgm. for the second. The large intermediate dose of 0.0005 mgm. probably finds most of the significant reactors but it is apt to produce too many severe reactions. As a result of three years' trial of a larger

*Presented at a meeting of the Douglas County Medical Society, February 1940.

**Director, Health Service, University of Kansas.

than recommended first dose followed by the regular second dose we found that the first dose could be increased safely ten times (to 0.000,2 mgm.) with no more severe reactions and with approximately six per cent more positive reactions than with the regulation first dose, thus materially reducing the number of cases requiring a second dose. The purpose of the tuberculin test is not only to find active cases of tuberculosis but to find the cases that have become tuberculin sensitive, hence the second, and maximum, dose is important. The tuberculin sensitive individual has been infected with tuberculosis. If we know who is tuberculin sensitive we may be able to investigate his family and contacts and find which one is or has been an active case of tuberculosis and is responsible for spread of the infection.

In using the tuberculin test as the first step in finding tuberculosis we subscribe to the belief that the presence of tubercle bacilli in the body produces a state of allergy which becomes manifest by a positive response to the intradermal injection of the metabolic products of the tubercle bacillus. It is essential to recognize that allergy does not develop immediately after tuberculous infection, but may require several weeks for its appearance, and there may be alterations in the allergic state during acute illnesses and in moribund cases of tuberculosis. There is no adequate proof that the size of the reaction to tuberculin is a quantitative test of the extent of tuberculous infection.

Prior to the initiation of tuberculin testing at the University of Kansas in 1932, tuberculosis was diagnosed on the basis of symptoms, history, x-ray findings and sputum examination. The student appeared with some of the classical symptoms of tuberculosis: Hemoptysis, cough, loss of weight, fever, fatigue and night sweats; the history was investigated; there followed a careful examination of the chest in which it was not uncommon to find physical signs of infection; the sputum was examined and the chest x-rayed. Occasionally a case of moderately advanced tuberculosis was found. One student in a far advanced stage was brought to the dispensary because

her coughing disturbed the sleep of the roommate. They are now both dead of tuberculosis.

The procedure followed in our case finding program at the University of Kansas is:

1. Medical history and physical examination of all new students, followed by:
 2. Tuberculin test,
 3. X-ray of the chest of every positive reactor,
 4. Careful investigation of all cases showing suspicious chest x-ray findings, this follow-up including:
 - a. Re-investigation of history,
 - b. Re-examination of the chest,
 - c. Laboratory tests:
 - i. Sputum examination,
 - ii. Examination of the fasting stomach contents three successive mornings, by direct microscopic examination of the centrifuged residue and by injection into a guinea pig,
 - iii. Sedimentation rate, and
 - iv. Blood counts,
 - d. Temperature, pulse and weight observations.

In the past eight years we have examined and tuberculin tested a total of 9,414 students, which includes only 120 tuberculin tested in 1932 who were not classified by age and sex. Of them remaining 9,294, 6,239 were men and 3,055 women. The total of positive reactors were 3,150 or 33.46 per cent, of which 2,295 were men and 810 women. The percentage of positive reactors among the men was 36.78 per cent and of the women 26.51 per cent. This is in line with findings throughout the country, where the per-centage of positive reactors among the men is considerably higher than in the women, altho the women will show a higher incidence of active tuberculosis than men in the same age group.

The ages of these students average eighteen years for the women and nineteen years for the men.

With a few exceptions, all students examined who had positive tuberculin tests also had chest x-rays. Usually only a flat plate is taken. All plates are read by Dr. G. M. Tice, radiologist, University of Kansas Hospitals. The number of students failing to complete the tuberculin tests and x-rays varied from twenty-seven to 101 each year. Reason for failure to complete the tests and x-rays are:

TABLE 1

Year	Number Tested			Number Positive			Per cent Positive		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1932-33			120			45			37.5
1933-34	404	135	539	149	47	196	36.88	34.81	36.36
1934-35	966	429	1395	329	105	434	34.05	24.47	31.11
1935-36	1011	462	1473	358	126	484	35.41	27.27	32.86
1936-37	1100	575	1675	302	109	411	27.45	18.96	24.54*
1937-38	941	492	1433	353	108	461	37.51	21.95	32.17†
1938-39	1169	635	1804	489	195	684	41.91	30.70	37.91‡
1939-40	894	487	1381	390	152	542	43.62	31.21	39.25§
Total	6239	3055	9414	2295	810	3150	36.78	26.51	33.46

*786 students tested with a single dose of 0.000,2 mgm.

†617 students tested with a single dose of 0.0005 mgm.

‡includes 355 seniors.

§first semester new students only.

1. Belief that the tuberculin test is harmful or painful.

2. Parental objection.

3. Objection on the basis of religion or cultism and

4. Withdrawal from school.

The physical examination is not compulsory.

Interpretation of the chest plates for evidence of tuberculosis depends upon a knowledge of the fundamental pathology resulting from implantation of of tubercle bacilli in the lung. This is summarized in "Diagnostic Standards" published by the National Tuberculosis Association, 1938, from which the following three paragraphs are abstracted.

The primary or first infection with the tubercle bacillus in the lungs produces a single, occasionally multiple, pneumonic focus, usually in the lower part of the upper or the upper part of the lower lobe of the lung near the pleura. This process becomes caseous, bacilli are carried thru the lymph channels to the regional bronchopulmonary lymph nodes where, in turn, caseating lesions appear. The primary focus is encapsulated by fibrous tissue and gradually the lesion is invaded by fibrous tissue and then by calcium. Rarely healing by resorption or fibrosis occurs. In a few cases in children this primary focus may progress instead of healing, and large excavating pneumonias result. If there is rupture into a bronchus the infection may spread throughout the lung. Bacilli from a lymph node focus may be carried thru the efferent lymph channels, finally invade the blood stream and spread to the lungs, kidneys, meninges and bones. The result of such widespread infection may be death but some recover. The primary lesion may be smaller than can be seen microscopically. End results of primary infections not ending fatally are:

1. Calcified parenchymal and regional lymph nodes which may contain viable tubercle bacilli, and

2. The body has become allergic to tubercle bacilli and their metabolic products.

Reinfection (adult or secondary) tuberculosis may result after a latent period following primary infection by one of these means:

1. Inhalation of bacilli from outside the body.

2. Breaking down of the primary parenchymal focus with discharge of tubercle bacilli directly into the lungs,

3. Breaking down of a caseated regional lymph node into a bronchus with resulting aspiration of the bacilli and a tuberculous pneumonia,

4. Spread of tubercle bacilli from an active regional lymph node thru the lymphatics and the blood stream producing multiple foci of infection, and

5. Breaking down of the small primary apical primary focus with discharge of bacilli into the bronchial tree.

The lesion of reinfection tuberculosis appears most frequently in the infraclavicular or midlung regions. The progress of the lesion is by caseation and excavation, at which stage dissemination thru the bronchial tree is common. The infection is apt to involve more area and be more progressive than the primary

type and there is less involvement of the regional lymph nodes. Healing is more frequently by fibrosis than by calcification.

The presence of a negative tuberculin test does not preclude the finding of evidence of previous tuberculous infection in the lungs. It is generally accepted that the allergy produced by tubercle bacilli in the body may disappear when the lesion becomes healed and the living tubercle bacilli are destroyed.

Among the 9,414 students tuberculin tested in the past eight years there have been thirty-three cases of reinfection type of tuberculosis, with an incidence of 0.35 per cent. Thirteen of these have been proved to be active; seven of them are now or have been in sanatoria and six were treated in their homes. Six of the active cases were diagnosed at the time of entrance to the University, five showed the presence of tubercle bacilli in the gastric contents during the course of the first year of observation, one became active after two years and another after three years. Twenty of the thirty-three cases remain diagnosed as inactive tuberculosis.

During the same eight year period twelve additional cases of tuberculosis were diagnosed among students who were not previously tuberculin tested. Seven of these were found in the years 1932 to 1936 and three in the last four years. There were two cases of arrested tuberculosis, diagnosed elsewhere, who entered school.

RESULTS OF TUBERCULOSIS CASE-FINDING

	Diagnosed Among 9414 Students Tuberculin Tested				Diagnosed Among Students Who Were Not Tuberculin Tested			
Year	Active		Inactive		Active		Inactive	
	Men	Women	Men	Women	Men	Women	Men	Women
1932-33				1			1	1
1933-34	1		1			1	3	
1934-35			1				1	
1935-36			2			1	1	
1936-37	1	2	2	2			1	
1937-38	2		1	1			1	
1938-39	2	1	4			1		
1939-40	2	2	5					
Totals:	8	5	16	4	0	3	8	1
	13		20		3		9	
	33				12			
	45							

Undoubtedly the more refined methods of diagnosis used the past four years account for the decrease in the number of cases diagnosed aside from those tuberculin tested. To make the program more effective, all students should be required to have a tuberculin test, the negative reactors should be re-tested each year and the positive reactors should have chest x-rays every six months or year. Similar programs are in effect in several colleges.

Investigating the history of contact, it was found

that among 542 positive reactors in September, 1939, 5.9 per cent gave a history of previous contact with tuberculosis; of the negative reactors 3.8 per cent had been exposed. Examination of the histories of the tuberculosis cases diagnosed in the past eight years revealed that six knew of possible contacts (three of these may have been exposed in their work), five knew of no contact, two thought they had been exposed and two said they had no contact but investigation found active tuberculosis in their homes.

SUMMARY

The method of tuberculosis case-finding among students in the University of Kansas by physical examination, tuberculin testing, use of the x-ray and confirmation by finding tubercle bacilli in the sputum or gastric contents has been outlined, and the results of the program presented. In eight years a total of forty-five cases of reinfection tuberculosis have been found, thirty-three per cent as a direct result of tuberculin testing and twelve among students who were not tested. Of the former group thirteen were active and of the latter, three. All cases have been placed under treatment. The early diagnosis promises good therapeutic results.

BIBLIOGRAPHY

1. Eighth Annual Report Tuberculosis Committee American Student Health Association, *Journal-Lancet* 59, 168-176, April 1939.

X-RAY INTERPRETATION IN TUBERCULOSIS CASE —FINDING

Galen M. Tice, M.D.

Kansas City, Kansas

The value of chest roentgen examination of a large group of supposedly healthy individuals is demonstrated in the student health service survey conducted annually by many of the State Universities of our country. The figures reported by Dr. Canuteson of the University of Kansas Health Service correspond quite well with those reported by other institutions. Approximately one-third of those tuberculin tested showed a positive reaction. Of the 9,414 students tested during the last seven years 0.35 per cent were shown by roentgen ray examination to have an adult type tubercular infection.

Although there is some dissenting opinion among authorities, it is generally agreed that calcification in the lungs is of tubercular origin. In reporting on over 3,000 chest plates, constituting the survey in the Health Service of the University of Kansas made

during the past seven years, we have noted the presence of calcification in the primary lesion and in hilar glands. The presence of calcification has not been stressed in our reports unless there was evidence of poor calcification suggesting the presence of incomplete healing. Only a few cases of this type have been seen. A few of these have been followed over the entire four year period of the college course. Most of them showed increased calcification of the primary lesion during this interval. A few showed no change in the density of the shadow to indicate healing and none showed reactivation of the primary focus. We recognize the fact that pathologically, clinically, and radiographically a primary lesion may remain quiescent until adult life and then become active, but our personal observation leads us to consider this a very rare circumstance as compared to the reinfection type of adult tuberculosis.

The intelligent employment of roentgen examination of the chest requires an understanding of the information that can be obtained by roentgenology; the limitations of the x-ray examination; the method of obtaining the desired information; the proper relationship of x-ray examination to other types of examinations.

The tendency to diagnose a chest lesion as a certain pathological process because it looks like a previously visualized pathological process seen at some other time is to be deplored. This removes radiology from its proper place in medical science and places it in the class of photography. The roentgenologist will be accurate just to the extent that he has a knowledge of pathological processes and can visualize this pathology in terms of the shadows seen on the roentgenogram. The roentgenologist will do well to consult with the clinician for the purpose of securing all pertinent facts available before correlating the shadows seen on the plate into a diagnosis. It is a spectacular occurrence when the radiologist can make a positive accurate diagnosis from the plate alone, but it does not help his reputation as a careful observer if the unassisted diagnosis is entirely wrong.

It is needless to stress the fact that a properly exposed film is all important as the first step in roentgen examination. An attempt is being made to standardize the technic of taking a chest plate. Many chest plates taken by the occasional radiographer are so over or under exposed as to be unsatisfactory for diagnosis. Unfortunately the amount paid for a chest examination to the doctor by the relief organization on charity patients is often so small that the physician feels he cannot afford to take a more adequate plate to correct his error. To protect his reputation as a careful diagnostician he cannot afford to express an opinion formed from a

poor plate, even though it costs him a few cents more to get a satisfactory one. X-ray supply houses and film salesmen are competent to advise the optimum technic and are usually happy to be of service in this respect.

Fluoroscopic examination as the sole procedure in routine chest examinations is generally conceded to be unsatisfactory in detecting small lesions. As an adjunct to the roentgenogram it is of extreme importance. On a single film a minimal apical or infraclavicular lesion may be obscured by the clavicle or rib. It is conceivable that this may be seen on the fluoroscopic screen on a different phase of respiration or in an oblique position. When once seen it should be recorded in the same position on a spot film. If a dense area of consolidation is seen a Bucky film is invaluable in securing proper penetration and contrast to visualize cavities. More recently the tomograph has demonstrated its value in visualizing and determining the depth of a cavity. It is an expensive procedure and for routine examination is not yet popular.

Our interest has been primarily in finding the individual with infiltration in the upper lung field. It is not in the province of the radiologist to diagnose active tuberculosis from a single chest film. We recognize the fact that all medical diagnosis is hazardous, requiring in many cases all of the laboratory and clinical skill at our disposal. If infiltration in the infraclavicular area or apex is seen on the roentgenogram in an individual who is ambulatory and apparently in good health, a diagnosis of tuberculosis, activity indeterminate, is justified. The ultimate diagnosis must depend on the demonstration of tubercle bacilli in the sputum or gastric contents. Even with demonstration of infraclavicular infiltration care must be taken in making a positive diagnosis of adult tuberculosis. We have seen several cases in which the individual was below normal physically. The x-ray plate visualized rather extensive infraclavicular infiltration. A subsequent plate within a few days or weeks visualized a normal chest. Obviously the infiltration was a not very virulent pneumonia and definitely not tuberculous. If a cavity is seen a diagnosis of active tuberculosis can be made roentgenographically. Even in this case we must consider the possibility of a lung abscess or necrotizing bronchial carcinoma. If serial plates are secured the radiologist is in a position to diagnose, a tendency for the pathology to heal or become progressively worse.

Basilar tuberculosis is hardly within the realm of roentgen diagnosis. It definitely occurs, even with cavitation, but has no characteristic roentgen picture. If infiltration is seen in the upper lung field our first thought is tuberculosis. If it occurs in the

base we think of pneumonia, bronchiectasis, lung abscess, or even bronchial carcinoma with a superimposed infection before we consider tuberculosis. Naturally the clinician must think of basilar tuberculosis as a possibility and secure a sufficient number of sputum examinations to eliminate it as a diagnostic possibility. He is the one to make the diagnosis not the roentgenologist.

Despite the derogatory remarks relative to the value of roentgen diagnosis in finding early tuberculosis made by Dr. Myers¹, most clinicians and radiologists consider it of primary importance. No longer is there fear that roentgen examination of the chest will endanger the clinician's diagnostic acumen. The infiltration may be advanced even to the point of cavitation before it is recognized clinically. Sampson and Brown of Trudeau Sanatorium, Saranac Lake², report 280 cases of minimal tuberculosis. In twenty-seven per cent moderately coarse rales were heard at the apex; twenty-seven per cent had hemoptysis; twelve per cent had pleuritic effusion. Tubercle bacilli were found in thirty-five per cent. Ninety-nine per cent showed parenchymal infiltration on the x-ray plate. In another series of 1,004 consecutive cases there were none with definite physical findings and a negative x-ray plate and 396 in which the physical signs were normal and the roentgenogram showed infiltration. In 392 with cavities as revealed by the x-ray only fifteen per cent showed positive or suspicious physical signs of cavities. In another series of 500 cases definite physical signs of cavitation were revealed in only five per cent of the cases.

CONCLUSION

A group survey of apparently healthy individuals with chest roentgenograms will reveal a small per cent of tuberculous individuals some of whom will be proven active. In the diagnosis of pulmonary tuberculosis it must be borne in mind that it is a chronic and insidious disease and that it is usually present a long time before there are either symptoms or physical signs. The usual case is moderately or even far advanced before it can be detected, even on the most expert and careful physical examination. The x-ray plate, on the other hand, will reveal a minimal lesion usually before the diagnosis can be made clinically, permitting a presumptive diagnosis. By diligent search of the sputum or gastric contents in many of these early cases the organisms can be isolated, enhancing the possibility of a cure and decrease in morbidity. Even more important in a closely knit society, as in a State University, the individual who is spreading the organisms among his fellows is found and isolated from society until his period of infection has terminated.

BIBLIOGRAPHY

1. Myers, Arthur J.: *The Detection of Tuberculous Infection*. J.A.M.A. vol. 112: 1904-1910, May 13, 1939.
2. Sampson, H. L., and Brown, Lawrason: *Radiology* vol. 22: 1, Jan. 1934.

PROLAPSE OF THE INTER- VERTEBRAL DISK*

Francis A. Carmichael, Jr., M.D.

Kansas City, Missouri

Low back pain, lumbago and sciatica are such commonplace ailments that they should interest all practitioners, regardless of the specialty which they profess.

Down through the recent medical history it seems that these conditions have not received their just consideration. Sometime ago anyone suffering from low back pain was said to have "Railway Spine," a meaningless designation which usually carried a neurotic stigma. Following this designation came the concept of sacro-iliac subluxation and strain, which is actually a rather uncommon condition. However, for this condition, real or imaginary, a variety of therapeutic attempts have been made, including, to mention only a few, the use of arch supports and special shoes to correct the posture, the correction of unconventional positions of the uterus, the use of belts, braces, casts, and other appliances, all designed to reduce the mobility of the back, the use of heat baking and massage, trick diets and most any other form of therapeusis which one can imagine has been directed toward the correction of this disorder. Of the more formidable procedures which have been in vogue are fusion of the lumbosacral and sacro-iliac joints, decompressive procedures, both of the spinal cord and sciatic nerve and a multiplicity of technics for the injection of the sciatic nerve, ligaments, facial planes, epidural space and most anywhere else which seems vulnerable to the needle. In passing we should not forget "visceroptosis," that fascinating concept which resulted in one of the most extraordinary surgical debauches of all time. Sinuses have been exenterated, teeth extracted, and prostates extirpated in goodly number in attempts to alleviate this distressing condition.

This recital of the multiplicity of therapeutic assaults upon low back and sciatic pain only emphasizes the complexity of the problem. I do not propose to discuss in detail all the causes and treatments of back pain and sciatica, but rather, I would

like to review a rather common cause which is amenable to surgical cure in a high percentage of cases, namely, posterior protrusion of the intervertebral disk, with or without the frequent coincidental hypertrophy of the ligamentum flavum.

HISTORICAL

In Europe this condition was mentioned in 1857 by Virchow¹ and in this country by Goldthwaite² in 1911. The postmortem findings of such a case were reported by Middleton and Teacher³ in 1911. However, this condition was never popularized until the publication of the work by Mixter and Barr⁴ in 1934. Since that time numerous reports of this condition have appeared in the literature, the greatest number of cases will shortly be reported by Love and Walsh⁵. However, it has not been until quite recently and by the advent of the work of Love and Camp⁶, that our diagnostic methods have reached such perfection that we may regard this condition as commonplace.

ANATOMIC CONSIDERATIONS

Although former writers, including Adson and Ott⁷, regarded these lesions as true neoplasms, we know now that they are merely displacements of histologic normal tissue. The anatomic arrangement of the intervertebral disk and its ligaments has been amply described by Naffziger⁸. Essentially, the intervertebral disk which is interposed between each of the vertebral bodies is a structure about the size of a silver dollar and two or three times as thick. It is composed of two parts, the annulus fibrosis, a tough, fibroelastic capsule, and a softer, pulpoid center, the nucleus pulposus which is derived from the notochord. The disk is intimately adherent to the vertebral body above and below, and is restrained by the anterior and posterior longitudinal ligaments which traverse the entirety of the spine. When, for any reason, there is a weakness of the lateral portion of the posterior longitudinal ligament, any severe compression stress may extrude a portion of the intervertebral cartilage posteriorly through this defect. Such extruded portions are composed both of the annulus fibrosis and the nucleus pulposus, hence, the term "disk" is more appropriate than either of the other terms, as has been emphasized by Love.

The corresponding nerve roots make their exit at each spinal segment by the intervertebral foramina. These foramina are bounded above and below by the vertebral pedicles and their ligaments. Anteriorly, the foramina are bounded by the posterior longitudinal ligaments which restrain the disks. Posteriorly, the boundary is formed by the ligamentum flavum. Therefore, it is easily appreciated that any protrusion of the disk posteriorly, or any

*Read before the Golden Belt Medical Society, McPherson, October 12, 1939, and before the Sedgwick County Medical Society, Wichita, February 20, 1940.

hypertrophy of the ligament making it bulge anteriorly will result in impingement of the root at its point of emergence from the spinal canal. We shall see that these two conditions are frequently co-existent.

Since the sciatic nerve is made up of the roots emerging from the foramina of the fourth lumbar to the second sacral segments inclusive, it is easy to understand why sciatica is such a frequent result of this anatomic disarrangement.

SYMPTOMS

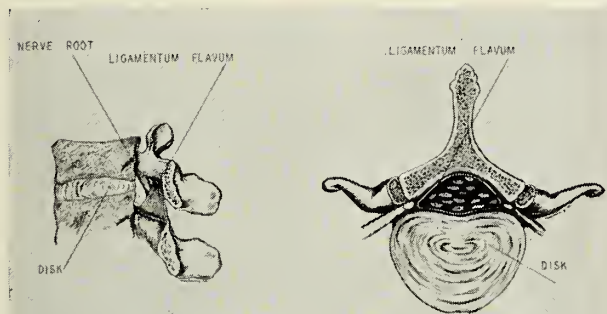
Such protrusions of the intervertebral disks produce symptoms in accordance with the level at which they occur. An analysis of this segmental dis-

tribution made by Love and Walsh⁹ reveals that the greatest number of protrusions occur in the lumbar area. This fact may be explained by the fact that this area in addition to receiving the greatest thrust and compressive force of the spine, is also an area of change of curvature and of considerable mobility. Of these lumbar protrusions, more than ninety per cent involve the last two lumbar disks.

It is the general consensus of opinion that the aetiology of this condition is traumatic in the great preponderance of instances and that trauma is almost always contributory. Consequently, we would correctly expect young, active, robust males engaging in heavy occupations to predominate.

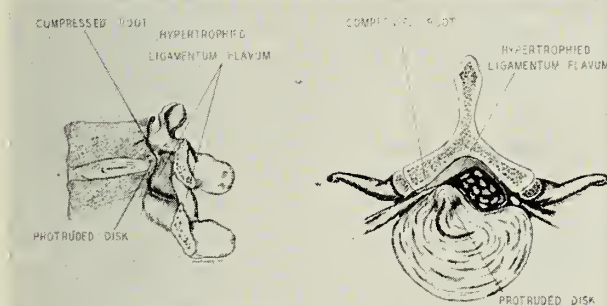
The most common initial symptom is pain in the back following stress or trauma of various degrees. Falling on the buttocks, lifting, stooping, straining, pushing, or being forcibly flexed are all common initial traumata. Frequently the patient will feel or hear a "snap" in his back at the time of the stress. The back pain which is frequently aching in character and localized across the small of the back may exist independently for days or weeks, or may be followed almost immediately by radicular sciatica. Some-

1. Normal Anatomy. 2. Pathologic Anatomy. 3. Spino-gram (Diagramatic). 4. (Fig. 1.) Number and situation of protruded intervertebral discs in 300 cases. 5. Lesion at Operation.



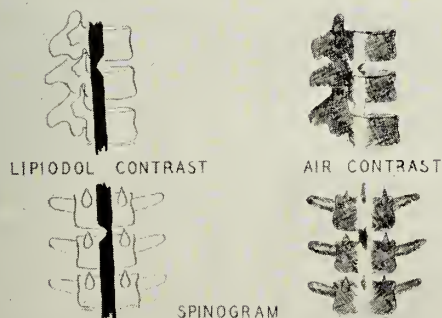
NORMAL ANATOMY

FIG. 1



PATHOLOGIC ANATOMY

FIG. 2



SPINOGRAM
(DIAGRAMATIC)

FIG. 3

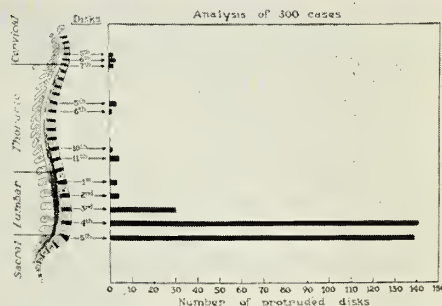
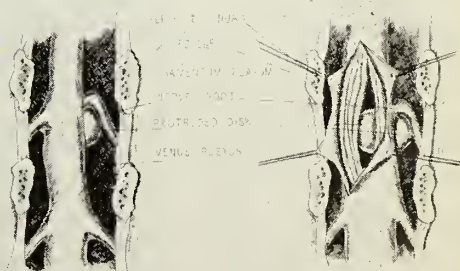


Fig. 1. Number and situation of protruded intervertebral discs in 300 cases.

FIG. 4



LESION AT OPERATION

FIG. 5

times repeated traumata are required before sciatica makes its appearance.

The occurrence of this radicular type of pain is, generally speaking, typical of this compression of the posterior spinal roots, whether it be resultant from disk or from spinal cord tumor, from which it is not easily differentiated. This pain sooner or later assumes a shocking, radiating character, being projected down the course of the sciatic nerve, frequently from the buttock to the heel. Coughing, straining at stool, sneezing, or jarring will quite frequently provoke excruciating paroxysms of pain. Such a patient is forced to assume an abnormal posture in walking, if indeed he can walk at all, and frequently walks with the so called "list" or lateral flexion of the trunk, usually bending away from the side of the implicated root, as this position tends to widen the intervertebral space on that side.

There are two other very characteristic symptoms, first, the fact that such sciatica is characteristically intermittent and may disappear spontaneously, thus tending to give the physician false confidence in inappropriate therapy. However, as time goes on, the periods of pain tend to recur more often, the recurrence is precipitated by less and less impressive trauma and the periods of pain become of longer duration. Secondly, is the very peculiar fact, which has adequate anatomic explanation, that the pain and sciatica may quite often recur on the side opposite to its previous existence. This intermittency of symptoms and alternation of the pain from side to side are so pathognomonic as to be practically confirmatory of the diagnosis when the two co-exist.

Just what constitutes root pain seems to be a somewhat debatable question. For my own purposes I regard root pain as a pain which is projected over anatomic pathways centrifugally, that is, over peripheral nerves. The pain is sharp, shooting and is frequently described as shock-like or electrical. As a rule, each individual pain is of short duration, although they come in rapid series. Between paroxysms of pain the patient usually has complete relief, or at most only residual soreness. Root pain is precipitated or exaggerated by coughing, sneezing, jarring or anything which increases the intrathecal pressure. Root pain, in any sector of the body, suggests involvement of the appropriate posterior or sensory roots.

SIGNS OF DISK

The signs which can be elicited on neurologic examination are often not spectacular. From the standpoint of inspection, the list, which I have mentioned, and the rigid spasm of the erector spinae group, together with marked limitation of motion

of the spine are usually obvious. In long standing cases a tendency to foot drop or actual atrophy of the anterior tibial group may be seen. The most constant and significant sign is absence or depression of the ankle jerk reflex on the same side as the pain. Likewise, and for the same reason, the corresponding hamstring reflexes may be affected since these reflexes synapt through the fourth lumbar to the second sacral arcs. Careful sensory examination often reveals anesthesia or diminished sensation to touch and heat over the dorsolateral aspect of the foot, sometimes extending up the lateral aspect of the leg. The signs of Kernig and Lasegue, or any other maneuver which stretches the sciatic nerve, will evoke characteristic pain. The sciatic nerve is usually tender to direct palpation at the notch and in the popliteal space. Sometimes rapid passive flexion of the head results in pain along the course of the sciatic nerve. This is a modification of L'Hermite's sign, formerly thought to be diagnostic of multiple sclerosis, but now known to be present in other cord lesions as well.

LABORATORY DIAGNOSIS

There are three important laboratory procedures available as aids in the diagnosis of this condition. First, and simplest is spinal fluid analysis. The only significant result is an increase in the total protein content of the fluid which is present in about seventy-five per cent of the cases. The other two methods employ radiography by the technic of contrast density. Lipiodol may be introduced in the lumbar space, five c.c. usually being required for accurate visualization. There is no excuse for cisternal introduction. In this instance the patient is fluoroscoped and plates taken in the prone position with the head tilted upward about thirty degrees. Lipiodol being of greater specific gravity than spinal fluid will occupy a caudad and ventral position, thus revealing any distortion resulting from encroachment upon the anterior aspect of the spinal canal. Lipiodol should never be used in the presence of a suspected inflammatory lesion or a high spinal fluid cell count. Spinogram or myelogram is accomplished in a similar manner by the introduction, in the lumbar space, of 30-40 c.c. of air. In this instance the plates are taken with the patient in the supine position and the head of the tilt-table depressed about thirty degrees.

In either of these contrast methods the presence of a protruded disk is revealed by an indentation of the column (air and oil) opposite the intervertebral space. Complete obstruction is rare, which fact explains the inadvisability of using smaller amounts of contrast media. Frequently, also, the column is narrowed by posterior encroachment, that is, by

something posterior to the cord. This is often verified at operation when a hypertrophied ligamentum flavum is found. This is a frequent accompaniment of disk, so common, that it is thought by some to represent a defense mechanism which attempts to lend additional fixation to an already sore back.

TREATMENT

Treatment for this condition has been, to say the least, diversified. It is rare for a neurosurgeon or a neurologist to see such a patient before the armamentarium and patience of several previous physicians has been exhausted. In fact, it is not unusual to have to remove a previous spinal fusion to gain access to such a lesion. By a superficial review of the anatomic considerations I think it is self evident why immobilization of the back will not cure pain resulting from this lesion.

However, there are three forms of generally employed therapy which often are of diagnostic importance in this condition inasmuch as they result in such intolerable and excruciating pain to the patient that root compression should immediately be suspected. When traction, epidural injection, or application of a hyperextending body case result in unbearable pain to the patient, one should immediately suspect spinal cord lesion and the use of puncture and contrast study is indicated.

DIFFERENTIAL DIAGNOSIS

To differentiate protruded disk from spinal cord tumor is frequently impossible either by clinical or laboratory methods. As a rule, cord tumor has a more insidious onset, the symptoms do not remiss, and the neurological signs are more prominent, the chemical and cellular alteration of the spinal fluid is more spectacular and x-ray frequently shows erosion of the pedicles.

The presence of root pain excludes myo-skeletal disturbances such as strains and subluxations which may result in low back and sciatic pain. Root pain only occurs by involvement of the posterior spinal root between its ganglion and its entrance into the cord. When sacro-iliac subluxation does occur, it can be accurately diagnosed by measurement of the degree of misplacement of the symphysis pubis, as advocated by Chamberlain.

Toxic and infective sciatic neuritis is the most difficult to differentiate. This condition is sometimes betrayed by a high pleocytosis of the spinal fluid, or by involvement of the other nerves in a poly-neuritic process.

TREATMENT

Obviously there can be no other logical rationale of treatment for this condition than surgical removal of the offending lesion. In this operation the prone

position is essential and some degree of flexion of the lumbar spine facilitates the procedure. For this reason intratracheal ether anesthesia is preferable. Midline incision and subperiosteal resection of the erector spinae gives excellent exposure to the underlying laminae. Only enough laminae should be removed as are actually required to expose the lesion. Occasionally the lesion can be removed without the removal of any laminae, but most often, at least, one and usually two laminae are removed to facilitate the operation. In removing the laminae the bone should not be rongeué farther laterally than the margin of the articulating facets and the facets should not be disturbed. Leaving these structures intact leaves excellent stability to the back and obviates the necessity of fusion. The disk may then be removed by lateral retraction of the caudal dura or the roots, or, when presenting in the midline, it may be removed by the transdural approach.

The results of this operation have been very gratifying and a very large percentage of patients have been resorted to complete occupational usefulness. The recurrence of such lesions has averaged one recurrence for each 250 to 300 patients. The mortality reported by those with the largest number of cases is below one-half of one per cent.

SUMMARY

Protrusion of the intervertebral disks has been discussed as it applies to the production of low back pain and sciatica, together with remarks upon the common diagnostic criteria of the condition. The technic of the operation has been briefly outlined.

BIBLIOGRAPHY

1. Virchow, R. L.: Untersuchungen ueber die Entwicklung des Schädelgrundes im gesunden u. krankhaften Zustande u. ueber den Einfluss derselben auf Shadelform, Gesichtsbildung u. Gehirnbau, Berlin, G. Reimer, 1857.
2. Goldthwaite, J. E.: The Lumbosacral Articulation. Boston Med. and Surg. Jour. 164: 365-372 (Mar.) 1911.
3. Middleton, G. S., and Teacher, J. S. Quoted from Love and Walsh (9).
4. Mixer, W. J., and Barr, J. S.: Rupture of the intervertebral disk with involvement of the spinal canal. New Eng. Jour. Med. 211: 210-215 (Aug.) 1934.
5. Love, J. G., and Walsh, M. N.: Personal communication to the author.
6. Love, J. G., and Camp, J. D.: Root Pain resulting from Intraspinal Protrusion of Intervertebral Discs. Jour. Bone and Joint Surg. 19: 776-804 (July) 1937.
7. Adson, A. W., and Ott, W. O.: Results of Removal of Tumors of the Spinal Cord. Arch. Neurol. and Psychiat. 8: 520, 1922.
8. Naffziger, H. C., Inman, V., Saunders, J. B. Lesions of the Intervertebral Disk and Ligamenta Flava. Surg. Gyn. and Obst. 66: 288-299 (Feb.) 1938.
9. Love, J. G., and Walsh, M. N.: Intraspinal Protrusion of Intervertebral Disks. Arch. Surg. 40: 454-484 (Mar.) 1940.

Sulfanilamide is a simple and highly effective treatment for cerebrospinal meningitis (inflammation of the membranes enveloping the spinal cord and brain). Kalei K. Gregory, M.D., Edward J. West, M.D., and Raymond E. Stevens, M.D., Providence, R.I., state in The Journal of the American Medical Association for September 28. They report a death rate of only 17.2 per cent in patients so treated as compared with 45.1 per cent in patients given antimeningococcus serum and 42.4 per cent in patients treated with meningococcus antitoxin.

TULAREMIA COMPLICATED BY SEPTICEMIA AND HEART DISEASE

David Stump, M.D.

Francis Quinn, M.D.*

Kansas City, Kansas

In the University of Kansas Hospitals, there have recently been two fatal cases of tularemia complicated by heart lesions. In one the heart disease was evident clinically; in the other the heart lesion showed no clinical signs or symptoms but was found on microscopic examination of the heart.

Foshay¹ has emphasized the importance of heart disease and tularemic septicemia in causing the death of tularemic patients. All of the eighty-five fatal cases in his study showed either septicemia or some severe lesion, most usually heart disease.

By May 15, 1929, the United States Public Health Service had on record only eleven cases of tularemia in Kansas and only slightly more than 800 cases in the entire United States⁶. The Kansas State Board of Health has on record fifteen cases of tularemia for the year 1929, while from 1930 to 1939 inclusive are recorded 384 cases with twenty-two deaths. Thirty-five per cent of the reported cases and forty-one per cent of the deaths in this ten year period occurred in the one year 1938⁴.

Although tularemia was first established as a clinical entity by Francis in 1919² and 1921³, cases of what are now known to have been tularemia occurred in 1904⁷ and 1908⁸ in such widely separated states as California and Ohio. Since Francis' report in 1919, tularemia has been reported from all parts of the United States, as well as from Japan, Russia, Turkey and various parts of Europe. The first autopsy report on a case of tularemia was published in 1924 by Verbrycke⁹. By 1936, Lillie and Francis⁵ were able to report data from autopsy reports on thirty-nine cases.

Two deaths from tularemia have occurred in the University of Kansas Hospitals. In one case the infection was complicated by a chronic undernutrition on the part of the patient and a chronic myocarditis was discovered at postmortem. The other case was complicated by active rheumatic heart disease together with old rheumatic changes in the heart.

CASE No. I

J. D., a white male aged fifty-six, cleaned a rabbit on September 10; a week previously he had received a

deep scratch on one finger. One week after cleaning the rabbit, he had a sudden onset of chills, high fever, nausea, dysphagia and severe prostration. Epitrochlear and axillary lymphadenopathy appeared two days later. Chills, fever and nausea continued, and dysphagia became more pronounced. Thirty c.c. of Sharp and Dohme antitularemic serum were given intravenously on the sixth day and again on the seventh day of illness. The finger scratch became ulcerated on the eighth day and began to heal on the eighteenth day. On the fifteenth day, the tularemia agglutination was positive in a dilution of 1:320.

On October 11, the twenty-fourth day of the illness, he entered the University of Kansas Hospitals in a comatose condition, emaciated, dehydrated and jaundiced. The finger lesion had healed and the epitrochlear and axillary adenopathy partially subsided. Many crepitant rales were heard in both lung bases posteriorly, but there was no evidence of consolidation. The heart rate was 120 and the blood pressure 105/70. Rectal temperature was 105.4 degrees. The liver edge was palpable two cm. below the costal margin. All reflexes were normal. Laboratory findings, including urinalysis, blood count, blood chemistry, blood sedimentation rate, and spinal fluid examination, were all within normal range. The agglutination for tularemia was positive in a dilution of 1:100. He was given fluids intravenously and subcutaneously and 2.5 per cent neo-prontosil intramuscularly in ten cc. doses three times a day. His temperature dropped to 102 degrees, where it remained until his death. Two days after entering the hospital, he suddenly became pulseless and cyanotic, his blood pressure dropped rapidly, and in spite of the administration of oxygen and stimulants he died a few hours later.

POSTMORTEM FINDINGS

Numerous typical tularemic nodules one to five mm. in diameter are visible grossly in the lungs, liver, spleen, retroperitoneal lymph nodes and the mesenteries of the jejunum and transverse colon. Microscopically, these show circumscribed, eosinophilic, necrotic areas containing many karyorrhectic nuclei and, in most of the organs, slight inflammatory changes in the surrounding tissue. The heart shows a slight increase of stroma, and through it are scattered small numbers of mononuclear cells, denoting a moderate, still active chronic myocarditis. The lower lobes of the lungs are covered by exudate of fibrin and mononuclear and polymorphonuclear leukocytes. All except the apices of the lungs show a consolidation which, microscopically, is not complete but is irregular in distribution. The alveoli adjacent to the tularemic nodules contain fibrin and mononuclear and polymorphonuclear leukocytes. The alveolar walls in these areas are thickened and edematous, and are often lined by swollen, proliferating epithelial cells. The abdomen contains 200 c.c. of clear fluid.

The liver is moderately enlarged. The tularemic nodules show a central area of necrosis surrounded by a relatively narrow zone of fibrous tissue which contains many macrophages, other types of mononuclear cells and a few polys. The liver also shows central and peripheral necrosis of the lobules, with increase of stroma and infiltration of inflammatory cells in these areas. There is proliferation of the bile ducts. The spleen is slightly enlarged. The tularemic

*From the Departments of Pathology and Internal Medicine, University of Kansas School of Medicine.

nodules cannot be seen to involve the Malpighian corpuscles. There is usually little reaction in the surrounding tissue, but a few nodules are encircled by cellular connective tissue containing mononuclear and polymorphonuclear leukocytes. There is an acute splenitis and marked congestion of the pulp.

The kidneys show a slight acute congestion. The pancreas and adrenal glands are negative. The tissue of the retroperitoneal lymph nodes shows no definite reaction to the tularemic nodules. The sinusoids of the lymph nodes are prominent and contain desquamated endothelial cells with a few polys. The nodules in the mesentery were not sectioned. At the autopsy, blood was aspirated from the heart and injected into a guinea pig which died spontaneously. The animal showed typical tularemic lesions and *Pasteurella tularensis* was cultured from the heart's blood and the spleen.

CASE No. II

K. P., a white female aged forty-seven, scratched her finger while dressing a rabbit. The wound became painful, ulcerated and refused to heal. Seven days later she became ill with a sudden onset of chills, high fever, nausea, vomiting and severe prostration. Epitrochlear and axillary lymphadenopathy developed. All of the symptoms remained severe, and when she entered the University of Kansas Hospitals on the fourteenth day of her illness she was acutely ill, with high fever and delirium. She gave a history of rheumatic fever and Sydenham's chorea at six years of age.

On admission, she was markedly dehydrated and had a temperature of 105 degrees. The teeth were carious, and the gums soft and infected. The tonsils were infected. The lungs were clear. The heart was slightly enlarged, particularly the left ventricle, and the typical findings of aortic valve stenosis were present. The heart rhythm was irregular due to auricular fibrillation, the rate was approximately ninety, and the blood pressure was 90/20. The abdomen was moderately distended, but was otherwise negative. Several small ecchymoses were present in the skin of the chest, back and arms.

On the dorsum of the left small finger there was a red, raised, indurated area surmounted by an ulcer one cm. in diameter. The left epitrochlear gland was enlarged, soft and extremely tender, and the left axillary glands were enlarged and firm. The urine showed one plus albumin and many granular casts. The white blood count was 16,700 with ninety-three per cent polymorphonuclears. The blood nonprotein nitrogen was 67.9, the creatinine 1.5. Spinal fluid was negative. The blood sedimentation rate showed a fall of twenty-one mm. in twenty minutes. Agglutination for tularemia was negative. Repeated blood cultures were negative. Chest x-ray showed softening of all bronchial markings, without definite infiltration. Her temperature remained around 102-104 degrees, and her condition grew steadily worse.

Treatment consisted of neo-prontosil, gr. forty-five by mouth daily, sodium sulphate, gm. one intravenously one to three times daily, and metrazol, one c.c. intramuscularly every one to four hours. She was also given fluids intravenously and subcutaneously. On her fifth hospital day she developed dullness and many crepitant rales in the lung bases posteriorly and her temperature rose to 106 degrees. On that day,

fifteen c.c. of antitularemic serum were given intravenously. She died the following morning.

POSTMORTEM FINDINGS

Many small, rounded, pale brown, well circumscribed areas, one to three mm. in diameter, are seen grossly in the lungs and spleen. The heart weighs 340 grams and bears a small area of fibrinous pericarditis. The aortic valve has a circumference of only 2.5 cm. as a result of old rheumatic changes. Microscopically, the myocardium shows a number of active Aschoff bodies and a chronic myocarditis. Each pleural cavity contains about one liter of clear fluid. The lungs show extensive consolidation involving almost all except the apical portions. Microscopically, the consolidation is seen to have an irregular distribution. The alveoli are partially lined by swollen epithelial cells and contain fibrin and leukocytes, about sixty per cent of which are mononuclear cells; the walls appear thickened and congested, with some proliferation of fibroblasts. Scattered throughout the consolidated portions of the lungs are many opaque, pale brown nodules one to three mm. in diameter. These nodules consist of fairly well circumscribed necrotic areas which sometimes obliterate the lung architecture. The adjacent areas often show necrosis of the exudate with preservation of the lung framework. The liver lobules show well developed central necrosis. Tularemic nodules are visible on microscopic examination but are not seen grossly. There is no reaction in adjacent tissue. The spleen weighs 320 grams, and on microscopic examination shows an acute hyperemic splenitis. The capsule bears a fibrinopurulent exudate in which about ninety per cent of the cells are mononuclears. Numerous tularemic nodules one to two mm. in diameter are present; these have caused practically no reaction in the adjacent tissue. The pancreas, adrenal glands and kidneys show no significant changes. *Pasteurella tularensis* was cultured from the nodules in the spleen.

The pathological findings in these two cases are fairly typical. Both, however, show a more widespread pneumonia than is commonly reported, and one of them showed the rather unusual finding of tularemic nodules in the mesentery. Grossly, these were typical, but unfortunately they were not sectioned. No giant cells were seen in any of the sections.

The mortality of tularemia is usually considered to be about five per cent, while in cases which develop pneumonia the mortality jumps to forty per cent. Foshay¹ showed that tularemic septicemia is an important factor in causing death. In all of his fatal cases the patient had either a septicemia or some other severe lesion, most commonly heart disease. Septicemia in cases of tularemia is thought to arise from erosion of a lymph vessel or vein by an adjacent area of necrosis, and because of its chance character is unpredictable. The widespread distribution of the lesions found at postmortem indicate that both patients were septicemic. This is also borne out by the patients' clinical course. Both

(Continued on Page 435)

President's Page

To the Members of The Kansas Medical Society:

Busy days are ahead for all members of our Kansas profession. Committee work is moving forward on all fronts. Those of our membership who have accepted committee assignments have done so willingly and by their actions have demonstrated their desire to contribute in a material way to the general up building of our Society.

The response of the men who have been called upon to render service in the medical preparedness program which is now well under way in Kansas has been excellent. The true Kansas spirit has manifested itself in this contribution. This program may be a continuing one, at least for an indefinite period of time to come, and it is our duty to see it through to a successful culmination.

Our immediate objective is to return all questionnaires, properly executed, to the office of the American Medical Association. The importance of this is obvious and cannot be over-emphasized. If you have for one reason or another, thus far failed to return your questionnaire please make the return today—it is an opportunity we have to classify ourselves; it is a patriotic obligation we have to perform.

Sincerely,

Lawrence L. Loveland M.D.

President, The Kansas Medical Society.

EDITORIAL

MEDICINE SHOW—AT GOVERNMENT EXPENSE

The so-called New Deal administration, while showering favors upon the masters of finance in the armament program now under way, is spending large sums to ballyhoo for votes. Defense appropriations are being used in many government activities in this publicity drive. For example, a pretentious new weekly magazine, MDC, published at government expense, carries in a recent issue a forward by Harriett Elliott, Defense Commissioner, who makes a statement to the effect that National defense not only means armament but health and physical fitness, furthering the economic well-being, and increasing the benefits of the democratic way of life. To maintain power the administration holds out promises of all things to all men, offers that cannot possibly be fulfilled because of the course the government is pursuing in preparing for the eventualities of a world at war.

The Department of the Interior, Division of Information, is broadcasting a series of radio skits under the caption, "THIS, OUR AMERICA." Program eight was entitled "Health and Education." The script is obviously written down for those who are less informed and credulous, designed to lead the listener to believe that all cancer is curable, if only the medical facilities were established through government agencies; that infant and maternal mortality would be greatly reduced under such medical service. The broadcast ends with the implication that along with military preparedness should go housing and the attention to civilian needs in every community as part of the great National defense program.

These are only two examples of the vast amount of expensive publicity being put out by various departments of the government. The New Deal is a troop of performers who are putting on a show far exceeding the creation of any Hollywood producers in imagination and resource. These players appeal to the rich and to the poor, to the ignorant, the weak and the sick. The actors perform in overalls and

jumpers before audiences of workers and in tall hats and elegant dress before the strong and powerful. All of the show is for the perpetuation of the organization in the pattern of political power which they have established. The ballyhoo for social security and the National Health program is nothing but entertainment calculated to win applause and acclamation for the actors, and most particularly for the leading man of the show.

IS IT A GAME?

The shortening of the days and the turning of the leaves herald the approach of another football season. Whether this is eagerly anticipated or viewed with alarm depends on one's opinion concerning the benefits of this form of athletic contest. Modern football demands of the player a splendid discipline, self-control and a subordination of the individual to the team. Today it might well be given a place in the list of those character-building activities William James suggested in his essay, "The Moral Equivalent of War."* Whether these good qualities outweigh the evils of "overemphasis" and "a game for gate receipts only" is debatable. Without taking sides on this point, it cannot be denied that there are few universities, colleges or even schools which have not been accused of professionalism in football to a greater or less degree.

The element of series injury to the player is far less of a problem today than it has been in the past. However, as is pointed on in an article in this issue of the Journal, safety for the player is apparently to be obtained only with careful supervision by a competent personnel. The author quotes figures that seem to show that the danger of serious injury in this sport is at a minimum only when there is adequate medical supervision and when the rules are enforced by competent officials. He very properly states that it is in the unsupervised games that serious injury is most likely to occur, and also suggests that his figures show that serious injuries can be prevented under nearly ideal conditions. Such conditions, however, are not obtained in a larger percentage of cases. As long as the colleges play football the schools will probably do likewise, as will the groups of sand-lot players.

There is one aspect of this question that is seldom referred to, although it has an important bearing on the large number of seriously crippling joint injuries. Thirteen to seventeen years cover the ages of most schoolboy and "sand-lot" participants of this game. For many boys this is a period of rapid skeletal growth, and their muscular and ligamentous strength does not always keep pace with their bony growth. "Their legs are long and their joints are loose," they are clumsy, and they do not co-ordinate well. To subject them to the danger of joint injury during an age when their joints lack the normal muscular and ligamentous support that will come a year or two later is to court disaster. Knee injuries at this age may, and often do, result in a joint that is never again able to stand the stress of even ordinary sports. It is probable that the number of boys incapacitated for college football because of knee injuries sustained in secondary schools is far larger than is shown by any available statistical data. And it is not only at the schools with inadequate medical supervision that such accidents occur.

No trainer of race horses would allow a two-year-old to run in steeplechases. To do so would almost inevitably result in a "breaking down" of the joints; he is then of no further use in racing, and is often "destroyed." In many cases, the boy of thirteen to seventeen is similar, structurally and physiologically, to the two-year-old colt. And, if so, his joints should not be subjected to the stress of football. The coach who appreciates the dangers inherent to this age group is a great rarity. Even a greater rarity is the coach who will not allow a rapidly growing, though perhaps fast and heavy, boy to take part in the sport. There have been times when it has seemed that the fate of the "broken-down" colt had better been meted out to the enthusiastic but woefully ignorant coach who allows a candidate of this age and type to play the game.

The professional athlete appreciates that he is only as strong as his legs, and he spends many hours of drudgery on "road work." The average schoolboy concentrates on a beautifully developed torso and arms. With walking now reduced to a minimum, a pair of sturdy legs and knees is far less common than it was in the days before the automobile.

If schoolboy football is to be reasonably safe only

when medical supervision of the elaborate and expensive type advocated in this article is furnished for all participants of all ages, one might well ask, Is it worth while? and, Is it a game?—*New England Journal of Medicine*, September 26, 1940.

*James, W.: *Memories and Studies*. 411 pp. New York: Longmans, Green & Co., 1911.

DR. CABOT RIDES AGAIN

It is indeed unfortunate that a man as widely known in the medical world as Dr. Hugh Cabot would be guilty of sponsoring so ill-considered and illogical a tirade as that which appeared in *American Magazine* early this year and again in *The Readers' Digest* for September under the invidious title, "Give the Patient a Break." Dr. Cabot's remarks involve such widespread calumny of the fundamental honesty and intelligence of the American physician that they cannot be allowed to pass without discussion by laity and public alike. Somehow Dr. Cabot seems to have become obsessed with the idea that the general practitioner is obsolete except as a sort of "humanizer" or contact man to acquaint patients with the findings of aggregations of specialists who will bind themselves together in groups to offer medical service on a prepayment or insurance basis. Dr. Cabot appears to believe that the persistence of the general practitioner on the contemporary scene is a menace to public health and derives largely from the desires of doctors to exploit their fellow men.

By way of proving that medical fees are based on the principle of charging "what the traffic will bear," Dr. Cabot makes the amazing statement that financial success came to him personally when he allowed his secretary to charge for each operation the amount which the patient's car had cost him. We suspect that the desire for literary effect may have warped Dr. Cabot's memory considerably on this point. If not, then times have surely changed profoundly within a generation. Perhaps few would dispute the assertion that surgeons sometimes perform services of great delicacy, skill, and responsibility for persons of wealth where the price of an automobile would be a reasonable fee. As a matter of fact, few indeed are the surgical fees, at least in the city where this is written, which would pur-

chase even a reliable used car. The well-to-do are habitually shrewd bargainers who are not inclined to permit themselves to be charged much more than minimal standard fees. As an offset to the very occasional ample fee, the physician and the surgeon disperse their services frequently for fractional fees or nothing. Indeed, so naively eager are American doctors to improve their skill that it has been humorously but fairly truthfully said that patient, who is not too critical of his surgeons' experience, can shop around and have a hernia repaired for any price he cares to insist upon, or even for nothing.

Dr. Cabot claims to have discovered through his association with the Mayo Clinic and his years at the University of Michigan that group practice is so much more efficient than private practice as to make the latter rather absurd. He further intimates that such group practice on a pre-payment basis would immediately solve the great problem of providing good service cheaply to America's millions. It is almost pathetic to have to shatter the beautiful spell which Dr. Cabot's words will evoke in the lay mind by calling attention to the dozens of gaps in his logic which he blithely slurs over. In the first place, health insurance is so baffling a problem that it has so far defied solution by the best minds in the insurance field. In some of its aspects, the difference between health and disease (so far as ability to work is concerned) is largely a state of mind. The headache which keeps Smith home may be ignored by Jones, even though Smith has a hangover and Jones an error of refraction. The difficulty in collecting actuarial data in the field of health is enormous. As a result, no insurance company can provide comprehensive non-cancellable health insurance to the average citizen at a cost which he can afford to pay, for he must carry on his shoulders the burden of the vast army who inhabit the borderland between health and disease. Nearly all of the so-called non-cancellable health insurance policies on the market are not what they seem, since really non-cancellable insurance would either be prohibitive in cost or would ruin the insurer. Neither the large insurance companies nor such clinical groups as Dr. Cabot has in mind are anywhere near an adequate solution of the health insurance problem, even for those who are well to begin with; how much more involved is

the problem of caring for those who are already ill, and therefore not eligible for pre-payment medical service!

To illustrate how far Dr. Cabot's lucubrations have carried him afield, it may be pointed to that the Mayo Clinic, which Dr. Cabot uses as a vindication of his ideas about cheap, pre-payment group practice, has never shown the slightest inclination to adopt the pre-payment plan. Furthermore, it has yet to be demonstrated that such large clinical groups reduce the cost of medical services to the public. Their advantages have to do with the aggregation of skill and not with the effect of mass production methods in lowering overhead.

It is doubtless still as true as when uttered ten years ago, that a well-trained general practitioner is capable of taking adequate care of seventy-five per cent of the patients who walk into his office. Since it is easy to refer the others to his confreres engaged in special practice, there is no reason for the general practitioner to give up his private office and begin to punch a time clock. The vast majority of competent students of the problem are convinced that the American system of private practice has produced lower costs and more efficient medical service than would obtain under such a type of practice as Dr. Cabot advocates. Dr. Cabot's lay readers will unfortunately not be aware of this, since he discreetly failed to mention it. — *Rocky Mountain Medical Journal*, October, 1940.

The drug prostigmine is an effective addition to the treatment of circulatory disturbances of the extremities in which spasms of the blood vessels are present, Samuel Perlow, M.D., Chicago, reports in *The Journal of the American Medical Association* for May 18.

The drug gave moderate or marked relief to twenty of thirty-one patients with such conditions as gangrene of the leg, hardening of the arteries, blueness of hands and feet, acute obstruction of arteries of the legs, and Raynaud's disease (a progressive nervous disorder characterized by attacks of coldness or excitement, congestion of the small blood vessels and swelling; it may eventually result in gangrene).

Prostigmine acts by expanding the effected surface blood vessels, thus releasing their spasm. In the cases in which such spasm was the main cause of disturbance, relief continued as long as prostigmine was administered and recurred when it was stopped. However, in the more severe cases involving complete blocking of a blood vessel, as by a blood clot, improvement in the accessory circulation apparently developed when the spasm of the vessels was relieved, and the relief obtained continued after the drug was discontinued.

EYE, EAR, NOSE & THROAT

REPORT OF TWO CASES WITH VISUAL DISTURBANCE COMPLICATING EPIDEMIC PAROTITIS

Lyle S. Powell, M.D.

R. L. Dunlap, M.D.

Lawrence, Kansas

Epidemic parotitis (mumps) is a contagious disease characterized by swelling of the parotid and sometimes of the salivary and the lacrimal glands. According to Holt and McIntosh,¹ both severe complications and a fatal termination are infrequent in childhood, but in adolescence they may occasionally occur.

Orchitis, oophoritis, pancreatitis, nephritis, labyrinthitis, and occasionally meningitis have been observed following an attack of mumps. Stevens² quotes Antonelli, from Archives d' Ophthalmologie, as having found only eighteen cases of optic neuritis following mumps reported in the literature through 1903. We wish to emphasize, with the following two case reports, that optic neuritis, although rare, can accompany this common disease of childhood.

CASE No. I

History: C.M., an Indian boy, age eleven years, was seen in consultation for the first time at the Haskell Institute Hospital in Lawrence, on November 20, 1937. He had had bilateral mumps eight weeks previously. There had been no complications until ten days after the parotid swelling had appeared when he complained of nausea and dizziness. His ears were normal and the hearing was not impaired.

These symptoms persisted until three weeks after the onset of the swelling when he began to vomit. He was taken to the City Hospital in Salina, because of the vomiting. It was at this time, three weeks after the onset of the illness, that his vision suddenly failed. He was transferred to the Haskell Hospital, where we saw him two weeks later.

Examination: Vision was questionable in either eye. The pupils were dilated with atropine and examination with the retinoscope showed a hyperopia of one diopter in each eye. The optic discs, seen with the ophthalmoscope, were small and showed a beginning pallor. A lace-like veil was seen about the vessels of the optic disc, very similar to that seen in subsiding choked disc.

Diagnosis: Optic neuritis following mumps.

Treatment: Artificial fever and foreign protein therapy.

Progress: One week later, distant vision was found

to be 2/400 right, 1.5/400 left. The fundi were essentially as seen at the original examination. Hyperpyrexia to 103 degrees for three hours each day was continued.

On the following week, his vision had improved to 6/400 right, 3/400 left. The discs were clearing and a definite improvement was noted.

Two weeks later vision had not improved but the fundi and optic discs were decidedly clearer. His fever therapy was continued another fourteen days.

At the end of this period, his distant vision was 5/400 right, 4/400 left. He was dismissed from the hospital to rest and return every week for observation. In the course of the following four months, his distant vision gradually improved and finally reached 20/20 in each eye. External examination was completely normal and refraction under cycloplegia revealed a +050 sphere for each eye. The fundi were normal except for a persistent veil about the vessels at the optic disc and slight pallor of the nerve head.

CASE No. II

History: D.C., a white boy, age eleven years, came to our office on April 4, 1939, complaining of headache, eyes burning, and inability to read the writing on the blackboard at school. He had apparently recovered from an attack of mumps one month previously.

Examination: Vision O.D. 20/50, O.S. 20/60. Near vision, Jiii at six inches right, JVi six inches left. Ophthalmoscopic examination of the fundi showed the central cup in both nerve heads filled with exudate. There was concentric contraction of the visual fields bilaterally for both form and color. The widest diameter of the form field right was sixty degrees, left forty degrees. Color fields were uniformly contracted in proportion to that of the corresponding form field.

Diagnosis: Optic neuritis following mumps.

Treatment: Bed rest and Amend's solution, drops eight three times daily were prescribed.

Progress: One week later distant vision had improved to 20/25+2 in each eye but near vision still remained defective. Measurements of accommodation on the Prince Rule showed forty-four years/3.75 diopters right, forty-seven years/2.50 diopters left. Blood pressure at this time was 112/70 and his temperature 98.2 degrees. Bed rest and Amend's solution were continued.

Two weeks later vision had returned to normal, 20/20 each eye. He read Ji ten inches each eye and on the Prince Rule 10/14 diopters each eye. Visual fields for both form and color had returned to normal. The fundi still retained some inflammatory exudate in the optic cups but otherwise were normal. He was dismissed and allowed to return to school.

DISCUSSION

May³ classifies intraocular optic neuritis as (a) choked disc, (b) descending neuritis and (c) neuroretinitis. Descending neuritis or papillitis is characterized by hyperaemia and moderate swelling of the disc. Exudate covering the disc surface and its edges indicate the presence of a true inflammatory process. Parsons⁴ and Jenkins⁵ agree with this classification and add that papillitis may be due to any

of the acute febrile diseases but that it only occurs in exceptional cases.

More recent observers, however, report mumps meningo-encephalitis to be of quite frequent occurrence. Birnberg⁶ reported thirty-three cases of mumps meningo-encephalitis from his private practice and found the most prevailing symptoms to be headache and vomiting. Ocular complications were observed but not reported in detail.

Swab⁷ cites a case of encephalitic optic neuritis from his records in which optic atrophy followed the illness in spite of active fever therapy and spinal fluid drainage. Opposed to this tragic outcome, Young⁸ reports a case of bilateral optic neuritis which suffered rapid and complete blindness but made a complete recovery on much the same treatment.

We feel that our first case probably had a labyrinthitis as well as a severe optic neuritis while the second demonstrated a mild papillitis with paralysis of accommodation. We wish to emphasize the importance of investigating cases of visual disturbance following mumps and the necessity of instituting early treatment.

BIBLIOGRAPHY

1. Holt, L. E., and McIntosh, R. *Diseases of Infancy and Childhood*. D. Appleton, Century Company, New York 1936, Ed. X pp. 968-971.
2. Stevens, A. A. *The Practice of Medicine*. W. B. Saunders Company, Philadelphia, 1923, pp. 256-259.
3. May, Charles H. *Diseases of the Eye*. Wm. Wood and Company, New York 1922. Ed X pp. 272-273.
4. Parsons, J. H. *Diseases of the Eye*. MacMillan Company, New York 1934. Ed VII pp. 376-377.
5. Jenkins, Wm. A. *Parotitis Epidemica*, *Tice Practice of Medicine*. W. F. Prior Company, Hagerstown, Maryland 1924. Vol. III. Chpt. XV pp. 320-321.
6. Birnberg, T. L. *Mumps Meningo-Encephalitis*, *Minnesota Medicine* 22:173, March 1939.
7. Swab, Charles M. *Encephalitic Optic Neuritis and Atrophy Due to Mumps*. *Archives of Ophthalmology* 19:926, June 1938.
8. Young, Roy Carl. *Mumps Encephalitis*, *New Orleans, Medical and Surgical Journal*, 89:25, July 1933.

"Air attacks have brought civilians into the same danger from air attack as soldiers and so the government has made similar arrangements both for the treatment of casualties and for payments for disablement from injury," the regular London, England, correspondent of *The Journal of the American Medical Association* reports in its September 21 issue. "The scheme for civilians applies to members of civil defense organizations injured while on duty and to all other civilians who depend on their earnings for a livelihood. It also applies to immediate dependents if the war injury is fatal. The grants in respect to injury are (1) a temporary injury allowance if the injury causes incapacity for work for not less than seven days; (2) a pension with family allowances if the injury results in serious or prolonged disablement. The temporary injury allowance for a married man is \$8 a week, for a single man \$5, for a woman \$4.50. Pensions for serious or prolonged disablement will be at the same rates as in the fighting services. For permanent disablement a man will receive \$8 a week, a woman \$6."

CANCER CONTROL

LIP AND INTRA-ORAL CARCINOMATA

J. V. Van Cleve, M.D.

Wichita, Kansas

The frequency of cancer of the lip is unknown; it has been estimated that primary labial cancer constitutes from two to three per cent of all cases of malignant involvement. The death rate (U. S. Public Health Report) from cancer of the lip appears to be increasing; this may be in part at least, explained by an increase in population and better facilities for diagnosis.

The following etiological factors have been mentioned by various authors: Leukoplakia, fissures, keratoses, recurrent herpes labialis, irritation from rough teeth, tobacco, and burns from chemical and physical agents. In Broder's study, ninety-eight per cent of the patients were males, the average age was fifty-seven years, and the most frequent histological type was the prickle-cell cancer. Basal-cell cancer of the lip is rare; when it does occur it is usually an extension from the skin.

LESION OF THE LIP

Any lesion of the lip which persists and manifests superficial induration on palpation, should be regarded with suspicion. Under no circumstances should the physician wait for more marked evidence or should the lesion be further stimulated by irritating caustics. If it does not disappear under proper hygienic care, a biopsy should be taken and the lesion thoroughly destroyed.

The only recognized treatment methods are surgery and irradiation by x-ray and radium, either alone or in combination. Interstitial irradiation using the removable platinum radium implants has given remarkable results in advanced cases. Let us now consider the problem of the best possible treatment for the prevention or cure of malignant deposits in the cervical lymph glands. In lip or intra-oral lesions, which are very small and which have been treated early, showing no clinical evidence of involvement of the cervical glands, we usually treat the primary lesion only, giving no therapy to the glands. If, however, the primary growth is rapid in development and has obtained considerable size, the glands, although non-palpable, are given a course

of heavy filtered x-ray. If the glands are palpable and operable, operation is clearly indicated in all cases. This should consist of nothing short of complete block dissection, followed by heavy filtered irradiation over the entire area.

CARCINOMA OF THE TONGUE

Carcinoma of the tongue is almost always of the squamous-cell variety. It may be located anywhere upon the tongue, however, it is most frequently observed on the tip, the dorsum and its borders. The most important predisposing causes are leukoplakia, dental caries and syphilis. It is much more common in males than in females.

Treatment is the same as carcinoma of the lip, although the use of interstitial irradiation in the form of platinum radium implants or the gold emanation seeds is becoming more popular.

EPULIS

Neoplasms of the gingiva are usually grouped under the general term "epulis." The tendency at present is to restrict the term epulis to those growths which develop at the dento-gingival margin and from the alveolo-dental periosteum. In their early stages, the histological picture may be that of an alveolo-infectious granuloma. Ivy classifies them into three varieties: 1. Fibroma, 2. Fibro-angioma and 3. Giant cell tumor. The differential diagnosis in regard to these varieties is generally based upon a histological examination, but all types of epulis should be regarded with suspicion, particularly if they are actively growing. However, most types of epulis are considered benign.

Treatment: The treatment is surgery.

TUBERCULOSIS CONTROL

SUBJUGATION OF TUBERCULOSIS*

Henry D. Chadwick, M.D.*

One of the great achievements of the twentieth century will be the subjugation of tuberculosis. We are far enough along in the campaign that started when the National Tuberculosis Association was organized thirty-six years ago to be quite certain that eventually victory will be won. We must not be too complaisant, however, as we are dealing with a

very resourceful opponent who will take advantage of any weakening of our defenses to make a counter attack.

In the early days of the Association the stress was put upon treatment, later on prevention, then on health education and on case-finding—these four together with research make up the forces that under one coordinated command are now in the field doing valiant work against the disease. Much has been accomplished. The death rate has dropped seventy-six per cent in forty years. We must not be content with what has been accomplished. We have far to go before our objective is gained. Sixty thousand lives a year even now are taken by the tubercle bacillus.

The tuberculosis mortality dropped thirty-three per cent and thirty-two per cent respectively in the last two decades. Let us assume, therefore, this average decline of approximately one-third every ten years can be maintained. In that event, the tuberculosis death rate would be thirty in 1950, twenty-one in 1960, fourteen in 1970, and forty years from now in 1980 a rate of nine or ten may be anticipated. The bells that ring in the year 2000 may sound the death knell of the tubercle bacillus.

The federal department of agriculture has led the way in a successful campaign to eradicate bovine tuberculosis. The success of the agriculturists is due to their persistence along one line—a direct attack on the bacillus and giving no quarter, although this involves the destruction of the host.

Our problem is more complex. We can search out the bacillus but when found we cannot destroy the carrier. We must temporize, we must educate and by slower methods of prevention try to protect others. We attempt to cure often succeed, and so do much to limit the spread of infection. The slaughter of human beings on the pretext of affording them protection is deemed illegal, and outside of modern warfare that measure is barred. The substitute is segregation in institutions. My plea, therefore, is for more beds—one for every tuberculosis patient who should have one.

How many beds should we provide to meet this need? There are 732 institutions listed in the 1938 sanatorium directory with a capacity of 90,000 beds. This is approximately one and one-half beds per annual death. It has been shown that a minimum of two beds for each annual death are needed where a good case-finding program is carried on and well equipped institutions are available. Thirteen states have exceeded this quota and four have as many as three beds per death. Far down the list are fourteen states that have not provided even one bed per death. The tuberculosis death rates in thirteen of those states exceed the average for the country as a

*From Tuberculosis Abstracts, October 1940, Presidential Address by Henry D. Chadwick, M.D., Thirty-sixth Annual Meeting of the National Tuberculosis Association, Cleveland, Ohio, June 3-6, 1940.

whole. The National Tuberculosis Association through its affiliated state organizations should wage a persistent campaign for more sanatoria in these states to bring them up to the minimum standard.

The number of beds needed in a state or community can be computed quite accurately by multiplying the number of annual deaths by ten and dividing the result by four. There are ten active cases of tuberculosis for each death and twenty-five per cent of them need and will accept institutional care. This has been the experience where good case-finding programs are carried out and well conducted institutions are available to the patients.

Applying our formula to the United States to find the number of active cases of tuberculosis, we multiply the 60,000 deaths by ten and the result is 600,000 which is approximately correct. The twenty-five per cent that will accept and need hospitalization would require 150,000 beds. There are now but 90,000, which means that 60,000 more beds are needed to provide a full complement.

Many additional beds for tuberculosis patients placed where most needed should be the No. 1 item on our agenda. Health education as it applies to tuberculosis is item No. 2. So familiar to us are these matters of what ought to be common knowledge that we deceive ourselves and erroneously believe that our teaching has accomplished its purpose and that the people as a whole are well informed. We must not jeopardize our favorable position through over-confidence. With the weapons now at our command wielded by the agencies now in the field working in close harmony we may expect continued progress toward our goal.

The ultimate surrender of the tubercle bacillus, however, is two generations away unless new developments in treatment come to our aid. This may be brought about more quickly by discoveries made in the fields of chemotherapy and nutrition. Research in both of these fields is yielding rich returns.

While the chemists of various types and interests are delving in their laboratories, we plodders in the broad fields of physics and education must continue to use the methods that have proven sound and true. Yet we must be alert and responsive as new procedures are developed, change our tactics if necessary, and vary our course to keep pace with the changing times.

With all the research work being carried on, sooner or later a discovery should be made that will revolutionize the treatment of tuberculosis. I have faith that this will come to pass.

TULAREMIA COMPLICATED BY SEPTICEMIA AND HEART DISEASE

(Continued from Page 427)

cases developed pneumonia. In case number one the disease was complicated by chronic malnutrition and avitaminosis, and by an active, although sub-clinical myocarditis, and in case number two by an active, chronic rheumatic heart disease with stenosis of the aortic valve.

BIBLIOGRAPHY

1. Foshay, Lee; Cause of Death in Tularemia; Arch. Int. Med.; Vol. 60, page 22; July, 1937.
2. Frances, E.; Deer-Fly Fever, or Pahvant Valley Plague; Public Health Reports; Vol. 34, page 2061; 1919.
3. Francis, E.; Tularemia Francis; Public Health Reports; Vol. 36, page 1731; 1921.
4. Kinneman, C. H.; Personal Communication.
5. Lillie, R. D., and Francis, E.; Pathology of Tularemia; U. S. Government Printing Office; 1937.
6. Simpson, W. M.; Tularemia; Hoeber; New York; 1929; page 64.
7. Simpson, W. M.; Tularemia; Hoeber; New York; 1929; page 8.
8. Simpson, W. M.; Tularemia (Francis' Disease); Ann. Int. Med.; Vol. 1, page 1007; 1928.
9. Verbruycke, J. R.; Tularemia, With Report of Fatal Case Simulating Cholangitis, With Postmortem Report; J.A.M.A.; Vol. 82, page 1577; 1924.

NEWS NOTES

RESIGNATION

Dr. G. W. Hammel of Hoxie recently resigned his position as Councilor of the Ninth District by reason that he will be absent from the state and engaged in post graduate work during the next two years. The Council at a meeting held on September 22 accepted Dr. Hammels resignation with regret and expressed to him its appreciation for the excellent service and assistance he had rendered the Society.

Dr. J. H. A. Peck of St. Francis has been appointed as Councilor pro-tem for the Ninth District. In accordance with the Society constitution and by-laws, Dr. Peck will serve until the next annual session, at which time a Councilor will be selected by the delegates of that district for the unexpired portion of Dr. Hammels term.

The Ninth Councilor District is composed of: Cheyenne, Sheridan, Decatur, Wallace, Logan, Sherman, Thomas, Rawlins, Norton and Gove counties.

MEDICAL PREPAREDNESS

The following is a report on recent developments in connection with the Kansas medical preparedness program.

Dr. F. L. Loveland of Topeka; Dr. C. C. Nesselrode of Kansas City; Dr. C. D. Blake of Hays; Dr. John M. Porter of Concordia; Dr. N. E. Melencamp of Dodge City, Dr. J. J. Brownlee of Hutchinson; Dr. J. F. Gsell of Wichita; and Dr. J. T. Reid of Iola, have been appointed as members of the Society Committee on Medical Preparedness. This committee, as is true of similar committees appointed in each state, will assist the War Department, other official military agencies, the American Medical Association Com-

mittee on Medical Preparedness and the county medical societies in organizing and coordinating medical plans under the National Defense Program.

Dr. F. L. Loveland of Topeka, who will serve as Medical Preparedness Chairman for Kansas, has forwarded a bulletin to the county medical societies requesting that each society appoint a local committee on medical preparedness. The local committees will assist in classifying members, in making a selection of members in the event practicing physicians are called to duty, in preparing plans for the physical examination of conscription registrants and in various other ways. It is believed that the local committees will have almost complete charge of the medical functions of National defense in each county.

Additional notices have been forwarded to all members urging that they complete and return their American Medical Association medical preparedness questionnaires if they have not already done so. It was agreed at a meeting of the Council held on September 22 that the various Councilors would assist in obtaining questionnaire replies from all Kansas physicians and the names of physicians who have not as yet sent their replies are to be forwarded to the Councilors and to each county medical society for assistance in that regard.

The Society has assisted the office of the Adjutant General of the State of Kansas in completing the medical personnel for the county selective service boards. Each of the 126 Kansas county selective service boards will have a physician assigned as medical consultant who will assist in handling physical examinations and medical questions. The services of other doctors of medicine in each county may be utilized to assist the medical consultant in any way desired.

The Adjutant General's office is also now completing the personnel of seventeen medical advisory boards which will be located in various areas of the state. These boards will be composed of representatives of designated specialties and will handle physical examination and medical questions appealed from county board decisions. The medical representatives assigned to the county boards and the area medical advisory boards, as is true of all part time personnel of selective service boards, will serve on a patriotic basis without compensation.

Of foremost importance at the present time is the completion of the American Medical Association medical preparedness questionnaire by every doctor of medicine in the United States. If you have not as yet completed your questionnaire, please do so at once.

GAFNEY CASE

Mr. W. H. Edmundson, attorney for the Wilson County Hospital recently filed the following motion in the case of Milton V. Gafney vs. the Wilson County Hospital now pending the Kansas Supreme Court:

Come now the defendants in the above entitled action and move this Court for an order abating the action, and dismissing the same on the grounds and for the reason that the issues purported to be raised in said action have become moot and in connection therewith and in support thereof allege and state;

I, Plaintiff invoked the original jurisdiction of this Court in mandamus to compel the defendants to extend to plaintiff as a duly licensed osteopathic physician residing in Wilson County, Kansas, the right to use the Wilson County Hospital for the purpose of treating patients residing in Wilson County.

The plaintiff alleged that he was a resident of Wilson County, Kansas, and that the Hospital was maintained and operated by Wilson County for the use and benefit of the inhabitants, including the plaintiff, of such county.

II, That since the institution of this action and on about the 27th day of May, 1940, the plaintiff, Milton V. Gafney, ceased to practice osteopathy in, and ceased to be a resident of Wilson County, and the State of Kansas, and, has been since such date, a resident of the City of Tyler, in the State of Texas, and has been and is now engaged in the practice of osteopathy in said City and State; that he is not now a resident of Wilson County, Kansas, and is not engaged in the practice of osteopathy in Wilson County, Kansas, and has no patients in Wilson County, Kansas.

That the defendants have been informed and believe, and therefore allege as a fact, that in plaintiff's removal from Wilson County, Kansas, to Tyler, Texas, the plaintiff, Milton V. Gafney, intended to and did permanently terminate his residency and practice in Wilson County, Kansas, and intended to and did establish a permanent residence and engage in the practice of osteopathy in the City of Tyler, State of Texas.

That the only purpose that was sought to be accomplished in this mandamus action was the enforcement of personal rights of the plaintiff, Milton V. Gafney, which he claimed existed because of his residency in Wilson County, Kansas, and that the plaintiff in becoming a resident of the State of Texas, retains no right, power, or privilege to maintain this mandamus action against these defendants; and this Court could not enter any judgment or order that would grant the relief prayed for, when the plaintiff, a non-resident of Wilson County, State of Kansas, and voluntarily has become a citizen of the State of Texas. The Kansas Supreme Court has not as yet ruled upon the motion.

MEETING

The Western Surgical Association will hold its 1940 annual session in Topeka on December 6-7. The scientific sessions will be held at the new Topeka Municipal Auditorium. Approximately 200 members from various parts of the country will attend.

Dr. W. M. Mills of Topeka, a vice president of the organization, will be in charge of the local arrangements.

PNEUMONIA COMMITTEE

Dr. F. L. Loveland, president, recently announced that the following members will serve as a Committee on Pneumonia Control to assist the Kansas State Board of Health in the preparation and plans for its 1940-41 pneumonia program: Dr. John M. Porter of Concordia, chair-

It is essential that every doctor of medicine in the United States complete and return a copy of the American Medical Association medical preparedness questionnaire.

If you have not completed your questionnaire, please do so immediately.

If you have lost or mislaid your questionnaire, the Society central office will furnish you with another copy.

man; Dr. Maurice Snyder of Salina; Dr. Henry N. Tihen of Wichita; Dr. W. H. Algie of Kansas City; and Dr. F. L. Loveland of Topeka, ex-officio member.

The committee will hold its first meeting at the office of the Kansas State Board of Health in Topeka on October 17.

COLLEGE OF PHYSICIANS

The Kansas Section of the American College of Physicians will have its annual fall meeting in Topeka on November 7 and 8 at the Hotel Jayhawk. One day will be devoted to a study of chemistry and physiology as applied in internal medicine and one day will be devoted to clinical papers. Dr. Thomas Holt of Wichita is Governor of the Kansas group.

A. M. A. BROADCAST

The new 1940-1941 series of broadcasting programs sponsored by the American Medical Association and the National Broadcasting Company will go on the air beginning Wednesday, November 13 at 9:30 p.m. Central Standard Time, over the Blue network and other NBC stations, and will run for thirty consecutive weeks.

The new program, "Doctors At Work" will dramatize what modern medicine offers the individual in the way of opportunities for better health and the more successful treatment of disease. Supervision will be by the Bureau of Health Education of the Association.

HOSPITAL MEETING

The Kansas State Hospital Association will hold its next annual meeting in Salina on November 8 and 9.

Speakers for the meeting will include: Dr. David L. MacFarlane, dean of men of Emporia Teachers College, who will speak at the banquet on Friday evening; Mr. Alden B. Mills, editor of Modern Hospital who will be the speaker at a luncheon meeting; Mr. Clarence G. Munns of Topeka, Executive Secretary of The Kansas Medical Society; and Miss Ella Jane Meiller, chairman of committee on dietetics training of the Kansas State College of Manhattan.

The Kansas State Hospital Association has invited all members of the Kansas Medical Society to attend, the meeting who desire to do so.

BRITISH AID

The following communications are published at the request of organizations interested in supplying assistance to Great Britain:

"A scheme is being arranged for the evacuation of 500-1000 children of British doctors to the U.S.A., and it is desired to find homes for them with American colleagues.

The British doctors would wish to pay for the support of their children, but owing to the present Treasury regulations forbidding the export of capital, it is proposed that temporarily a sum of money (provisionally £ 100 per child is suggested) be paid into a trust fund which will be administered by an Insurance Company and ultimately disbursed to the doctors in the U.S.A., in accordance with an equitable scheme

to be agreed upon by the Parents' Committee and the corresponding American Reception Committee with the approval of the British Treasury.

In order that the scheme should proceed without delay, a form is enclosed and if you can undertake the care of one or more children, please sign and return this and also get any colleague to sign similar forms and return them to me without delay.

Local representative: L. L. Bernstein, M.D., Brooklyn Jewish Hospital, Brooklyn, New York."

MINUTES

A meeting of the Committee on Child Welfare was held in Salina on September 8, 1940.

Members present were Dr. B. I. Krehbiel, Topeka, Chairman; Dr. Paul E. Belknap, Topeka; Dr. T. J. Brown, Hoisington; Dr. R. F. Boyd, Topeka; Dr. Paul C. Carson, Wichita; Dr. Earl G. Padfield, Salina; and Dr. J. A. Wheeler, Newton. Mr. Clarence G. Munns was present as Executive Secretary.

Dr. Krehbiel reported several reasons why conferences have not as yet been held with the State Department of Education and the Kansas State Teachers Association on school health problems as recommended by the Committee at its last meeting. The Committee authorized Dr. Krehbiel to proceed in any way he deems advisable in this connection.

Mr. Munns presented a letter which had been written on behalf of the Committee to the Kansas State Board of Health in regard to possibility for adoption of a board regulation on compulsory immunization and vaccination. Mr. Munns also reported that Mr. Wm. E. Scott, Attorney for the Board, indicated he felt it might be possible for a regulation of this kind to be adopted. The Committee suggested that Dr. Krehbiel attend the next meeting of the board, if the board so desires, for a discussion of this matter.

Dr. Boyd presented a report concerning the survey of the location of respirator facilities in Kansas which had been completed by the Kansas State Board of Health since the last meeting of the Committee. Following a discussion of the accessibility of Kansas respirators it was felt that Councilor District Three and Councilor District Ten are the only places in the state where the need of additional facilities of this kind might be considered. The central office was asked to write the Councilors of those districts for their opinion in this connection.

Mr. Munns presented a report concerning correspondence with the Commonwealth Fund in regard to postgraduate courses in pediatrics for practicing physicians and Mr. Munns was asked to continue correspondence on that subject.

Next item of discussion pertained to the presentation of a district postgraduate course on pediatrics. Decision was made that plans would be completed for a course of this kind to be presented during next October and November, and that the course should consist of talks on pediatrics to be given in connection with the showing of the Mead Johnson movie "Bobbie Goes to School." Dr. Carson, Dr. Menehan and Dr. Wheeler were asked to serve as a subcommittee to prepare a talk outline on immunization, and Dr. Belknap and Dr. Krehbiel were asked to serve as a subcommittee for preparation of a talk

outline to be used in conjunction with the movie. Doctor Krehbiel was asked to prepare the general plans for the course.

Dr. Padfield presented a report concerning his study of Kansas quarantine regulations. He suggested that no definite action be taken on this matter until additional data is obtained and he was asked to continue his studies in this connection.

Dr. Brown presented a preliminary report on milk control and was asked to present a further report on this subject at the next meeting of the committee.

Dr. Boyd stated he had been transferred to another division of the Kansas State Board of Health and that Dr. Paul R. Ensign had been appointed as his successor in the Division of Child Hygiene. He suggested that it might be advisable for Dr. Ensign to be appointed on the committee in his place. The committee expressed its appreciation to Dr. Boyd for the excellent assistance he has given.

Decision was made that the next meeting of the committee should be held in Wichita.

Adjournment followed.

POLIOMYELITIS

The Kansas State Board of Health reports as of October 11 that 438 cases of poliomyelitis have been reported in the state for 1940. Only two new cases being reported on Friday, and twenty-seven cases the week ending October 5.

CULTS

The following two statements are published by reason of their interest to doctors of medicine from a scientific standpoint. The statement describing the cause of poliomyelitis was published in a Kansas newspaper by a Kansas chiropractor. The statement relating to naturopathy was forwarded to candidates for the Legislature by the Association of the American Naturopathic Physicians of Kansas.

"Too often early SYMPTOMS of INFANTILE PARALYSIS are dismissed as ordinary child upsets. It is important that every mother should be acquainted with the type of symptoms occurring in the early stages of infantile paralysis. They are as follows:

Cold; fever; extreme tenderness of the skin, muscles, or joints; stiffness and pain in the spine; headache and vomiting; twitching or tremor, perhaps indicated by inability to hold a glass; stiffness of back of neck; inability to move neck, particularly inability to touch chin to knees; irritability.

An important fact, uncovered by the Chiropractic profession, must be given the most careful consideration by every mother in the prevention of infantile paralysis. Chiropractors have discovered that the great majority of cases occur after some kind of injury to the spine and the surrounding area. This type of injury can occur from some blow or fall, causing spinal displacement. Such displacements of spinal vertebrae can also be caused by a sudden abnormal contraction of spinal muscles resulting from exposure to the elements or a fall into cold water. It is these spinal displacements, according to Chiropractic, by causing irritations of spinal nerves and surrounding structures which can directly and indirectly affect segments of the spinal cord in such a way that the resistance and vitality of certain nerves are weak-

ened allowing inflammation—and poliomyelitis to develop.

Researches conducted by the Chiropractic profession prove conclusively that Chiropractic is effective in combating this disease. A survey conducted during 1938, of a total number of 1,511 cases of infantile paralysis revealed 71.5 per cent recovery, in 445 acute cases with marked improvement in all but 7.7 per cent of the cases handled. And in 889 chronic cases recovery occurred in 28.9 per cent of all the cases and improvement in all but 19.8 per cent of the cases.

When INFANTILE PARALYSIS strikes call a Chiropractor. He is the only doctor who has at hand a definite means to fight Infantile Paralysis."

"Naturopathy is a distinct system of healing based upon its own philosophy of health and disease. It may be defined as an art, science, philosophy, and practice, following definite physical, chemical, biological, mental, and spiritual laws for the restoration and maintenance of health and the correction of bodily disorders without the use of drugs or surgery. For relief and cure it makes use of Nature's most beneficent forces and agencies on the theory that under the normal conditions of natural living the body is a self-recuperating organism.

The Naturopathic Physician familiarizes himself with what constitutes natural living, learns to detect by diagnostic signs how, when and where departure from the normal or natural has taken place, and then applies his knowledge and skill, aided by the various kinds of Naturopathic treatments, to help bring about a return to the normal and natural. In reality Nature heals and cures. The Naturopathic Physician merely interprets Nature's laws for the patient and lends intelligent assistance.

The various forms of Naturopathic treatment have been classified under a Triplicity of Sciences (the Psychological, the Mechanical, and the Material) according to their nature, or whether they act upon or through respectively (a) man's emotional, mental, or psychic nature; (b) the anatomy of physiology of the body, its parts or any of its functions; or (c) the chemical substances which compose the cells and tissues of the body. Thus for treatment the Naturopathic Physician employs such sciences and means of cure as (a) a psycho-therapy, constructive suggestions, correction of wrong habits; etc.; (b) mechano-therapy, constructive massage, exercise, rest, corrective and orthopedic gymnastics, neuro-therapy, physio-therapy, sunlight, air, water, earth, light rays, color rays, ultraviolet, infra-red, diathermy, electricity, magnetism, heat, cold, vibration, concussion, suction, pressure, etc.; and (c) nutritional control, dietetics, external applications, biochemistry, vitamins, vegetables, and fruits.

No one of the foregoing remedial agents or sciences of treatment is broad enough in its scope to be efficacious as a cure for every disease and condition, so the Naturopathic Physician selects and uses the particular one best suited to the needs of the case in hand. More often he uses a combination of more than one for their cumulative effect or because one may be more effective when aided by another.

Naturopathic treatment has for its purpose the restoration of health. Among other things this is accomplished:

By removing from the system the accumulations of body wastes, poisons, and foreign substances, or to assist Nature in doing the same if she has already instituted her own processes of cleansing and regeneration;

By stimulating the organs of purification and elimination;

By freeing nerves, blood-vessels and lymphatics from all undue pressures and obstructions;

By equalizing the circulation in all parts of the body;

By restoring to diseased organs and tissues their normal blood and nerve supply;

By improving the circulation and toning up the nervous system;

By balancing the glandular activities and regulating the daily habits of life;

By supplying through the diet and in proper combination the requisite kind and amount of food substances so as to restore the chemistry of the body, preserve its function, build up its strength, enrich the blood, and so keep the body immune from disease or germs;

By reducing excessive acidity and removing foci of infection;

By correcting all discoverable abnormalities of the tissues, organs, muscles, joints, bones, and skin, such as swellings, stiffness, strains, tensions, displacements, relaxed and fallen conditions, curvatures, over- and under-developments, obstructions in passages, changes in temperature and moisture, inflammation, discharges, sores, ulcers, eruptions, etc.;

By making necessary adjustments in the mental and emotional life, and changes in personal habits, mode of living, etc.;

By advising on hygiene, sanitation, and how to live in accordance with Nature's laws of health.

Many of the methods of treatment which the Naturopathic Physician employs have been in use since the time before history began. Sunshine, fresh air, heat, exercise, water, clay and mud baths, etc., served as agencies of cure long before man knew how to treat himself intelligently. We see a similar situation among the animals now.

In early historical times, massage, manipulation of a crude type, rules of diet and hygiene inculcated by religious doctrines were added. The Greeks contributed athletics and physical culture, while the Romans made extensive use of baths of all kinds.

During the medieval times the Church fostered the various healing arts among which the methods of Natural Healing were outstanding. Faith cures were encouraged which gradually replaced the superstitious practices of the primitive folk. After the Renaissance the Nature-Cure movement continued to develop in Central Europe, where it received considerable impetus.

In the latter part of the nineteenth century such men as Priesnitz, Rickli, Kuhne, Bilz, Schuessler, Kather Kneipp, Just, Lahmann, Ehret, and others made important contributions to the Natural Healing Art. They did much to popularize the work which was now called Naturopathy. Hydro-therapy, or the water-cure, was perfected and added.

In this country Benjamin Franklin and other early pioneers did much to advance the cause of Nature-Cure. Later Naturopathy was brought over from Europe by Lust, Lindlahr, Carey, and others. Addi-

tions to the method of the Natural Healing Art were now being made very rapidly. Treatment by means of all kinds of artificial lights, by electricity, by color, etc., were made a part of Naturopathy. Physical Therapy and Ling Swedish-movement-cures and mechanical sciences of Naturopathic treatment, such as massage, electricity, exercise, hydrotherapy, radiotherapy and its diagnosis and light therapy are being made use of extensively.

There are today many workers in the Naturopathic field who are making very valuable contributions to the science of Naturopathy. Not a few of these are members of the medical profession, showing that there is a tendency on the part of medicine to include in its methods of practice some of the forms of treatment as well as to avail itself of much that Naturopathy has worked out and developed in the intervening years.

But Naturopathy has a basic philosophy as to the cause and cure of disease and its methods of treatment. Naturopathic Colleges teach a thorough course of study in Naturopathy.

Several States and the District of Columbia have placed it on their statute books, legalizing its practice."

MEMBERS

Dr. F. C. Beelman, Director of the Division of Tuberculosis of the Kansas State Board of Health, presented a paper before the Mississippi Valley Conference on Tuberculosis which was held in St. Paul, Minnesota, on October 2-4.

Dr. Paul R. Ensign of the Division of Child Health of the Kansas State Board of Health was recently appointed a member of the Society Committee on Child Welfare in place of Dr. R. F. Boyd who has been transferred from the Division of Child Health to the Division of Local Health of the Kansas State Board of Health.

Dr. Spencer Fast, son of Dr. W. K. Fast of Atchison has opened an office in Atchison. Dr. Fast is graduated from the Creighton University School of Medicine, Omaha, Nebraska.

Dr. H. W. Powers and Dr. B. J. Ashley of Topeka attended the meeting of the American Academy of Ophthalmology and Oto-Laryngology held in Cleveland, Ohio, on October 6-11.

Dr. Hugh M. Swaney of Goodland is the newly appointed health officer of Sherman county. Dr. Charles A. Dieter of Harper is the new health officer of Harper county to succeed the late Dr. C. E. Ressler and Dr. J. N. Hill of Hutchinson is the county health officer of Reno county.

Dr. H. B. Vallette has returned to Beloit from Boston, Massachusetts, where he spent July and August doing post graduate work in internal medicine at the University of Harvard School of Medicine.

The Cherokee County Public Health office has recently moved into a new and larger office. Dr. Joseph W. Spearling is the full-time county health officer of that county.

The following members appeared on the program of the Kansas City Southwest Clinical Society meeting held in Kansas City, Missouri, from September 30 to October 3:

Dr. Maurice A. Walker, Dr. Galen M. Tice, Dr. Fred E. Angle, Dr. T. J. Sims, Dr. H. R. Wahl, Dr. Lewis G. Allen, Dr. P. E. Hiebert, Dr. Harry W. King, Dr. Eldon S. Miller, Dr. T. R. Hamilton, all of Kansas City. Dr. Don Carlos Peete and Dr. Ralph H. Major of Kansas City, Missouri, and Dr. Arthur E. Hertzler of Halstead.

COUNTY SOCIETIES

The Brown County Medical Society met in Hiawatha on September 13. Dr. C. H. Kinnaman of the Kansas State Board of Health was a guest. Following a dinner meeting of the society, Dr. Kinnaman spoke at a public meeting in the auditorium on "Poliomyelitis."

The Central Kansas Medical Society held a meeting in Ellsworth on September 12. Speakers at the meeting were: Dr. James Hibbard, Dr. Vincent Scott and Dr. Wirt Warren all of Wichita.

The Butler-Greenwood County Medical Society held a dinner meeting in El Dorado on September 13. Matters pertaining to medical preparedness and medical organization were discussed. The society unanimously adopted the following resolution and requested that the same be published in the Journal.

"Whereas, knowledge of the death of the son of one of our esteemed members, has been received with sorrow. Therefore: Be It Resolved by the Butler-Greenwood County Medical Society to extend to Dr. F. F. Lemon and family the sincere condolences of the above society."

The Golden Belt Medical Society held a meeting on October 10 in Minneapolis. The scientific program and speakers for the evening were: "Hip Nailing" by Dr. Clyde B. Trees of Topeka; "The Treatment of Burns" by Dr. A. E. Hiebert of Wichita; "The Diagnosis of Congenital Syphilis" by Dr. Morris Polsky of Kansas City, Missouri; and "The Evaluation of Ocular Discomfort" by Dr. George F. Gesell of Wichita.

The Harvey County Medical Society met in Newton on September 12. Dr. H. H. Loewen of Wichita and Dr. A. S. Hawkey of Newton were the speakers.

The Johnson County Medical Society held a meeting in Olathe, on October 7. Cancer Control was discussed.

The Sedgwick County Medical Society met in Wichita on October 1. A symposium on Diseases of the Cardio-Vascular System was conducted with the following speakers taking part: Dr. J. L. Kleinheksel, Dr. Harold Palmer, Dr. Earl Mills, Dr. Allen Olson, Dr. Fred McEwen, Dr. T. T. Holt, and Dr. E. H. Terrill.

The Shawnee County Medical Society met in Topeka on October 7. A symposium on diabetes mellitus was presented by the following Topeka physicians: "The Ambulatory Patient" by Dr. D. C. Wakeman; "Diabetic Coma" by Dr. A. J. Brier; "Diabetes in Children" by Dr. P. E. Belknap; "Laboratory Procedures in Diabetes" by Dr. J. L. Latimore; "Surgery in Diabetes" by Dr. J. D. Bowen.

The Wilson County Medical Society held its first fall meeting in Fredonia on September 9, with the wives of the members as guests at dinner.

The Wyandotte County Medical Society held a meeting in Kansas City, on September 24. Dr. R. T. Westman of

Kansas City spoke on "Undulant Fever" and Dr. Lewis W. Angle of Kansas City spoke on "Treatment of Post-Operative Abdominal Wall Ulcers."

DEATH NOTICE

Dr. Hugo E. Nelson, 69 years of age, of Sharon Springs, died on September 2, in Denver, Colorado. Dr. Nelson was born in Dodge County, Nebraska, in 1871. He attended the University of Nebraska from which he was graduated in 1892. He served in the Spanish American war and later entered Creighton Medical College at Omaha, Nebraska, from which he was graduated in 1902. He came to Sharon Springs in 1914. He was a member of the Central Kansas Medical Society.

BLIND PROGRAM

The following progress report pertaining to the medical blind program of the Kansas State Board of Social Welfare was published on September 30, 1940, by Dr. John A. Billingsley, state supervising Ophthalmologist.

No. of the last eye report received.....	3,414
No. of eye examinations approved for Aid to the Blind.....	2,073
No. of eye examinations not eligible for Aid to the Blind.....	1,335
No. of eye examinations pending disposition	0
No. on the register not issued to cases between Nos. 1 and 3,414.....	5
No. of cases not accepted and No. issued to report	1
No. of re-examinations made and fee allowed	233

RESTORATION OF SIGHT PROGRAM

Total number of cases declared eligible for treatment	853
No. of cases known to refuse treatment.....	113
No. of cases under treatment.....	141
No. of cases treatment has been cancelled..	29
Total amount authorized for cases now under treatment	\$13,101.30
No. of authorized treatments completed during September, 1940.....	15
Cases still eligible for Aid to the Blind	6
Cases ineligible for Aid to the Blind....	9
Amount paid on 15 cases completed....	\$1,653.03
Doctor's fees	54.627%
Hospital fees	37.749%
Optical Company fees.....	5.747%
Drugs	1.877%

Total number of cases having received treatment	358
No. still eligible after treatment.....	136
No. of cases ineligible after treatment.....	222
Total amount paid for treatments since initiation of program.....	\$39,558.47

PREVENTION OF BLINDNESS

Total number of cases eligible for treatment	413
No. of cases known to refuse treatment....	3
No. of cases under treatment.....	77
No. of cases treatment has been cancelled..	5
Total amount authorized for cases now under treatment	\$3,366.50
No. of authorized treatments completed during September, 1940.....	6

LATE LITERATURE ON KANSAS

The Industrial Development Commission has available ample supplies of various late publications on Kansas which it will be glad to provide in quantities desired, on request, postage and express paid. The list includes:

"KANSAS TODAY," handsomely illustrated 32-page booklet in colors.

"YOUR INVITATION TO KANSAS," 16-page folder in colors, with impressionistic map.

"DO YOU KNOW? ILLUSTRATED FACTS ABOUT KANSAS," compilation of industrial cartoons in convenient pocket size.

"A NEW BUSINESS CODE FOR KANSAS," an analysis of the General Corporation Code of Kansas by Al F. Williams, general counsel Associated Industries of Kansas.

"KANSAS STATE HIGHWAY MAP, April, 1940," attractively illustrated and with descriptive text, prepared by the Kansas Highway Commission.

"KANSAS, POINTS OF INTEREST, HISTORICAL AND SCENIC," booklet by Kansas Highway Commission.

"KANSAS BUYERS' GUIDE," (1940) Preliminary Edition, compilation of Kansas manufacturers and business firms by Kansas State Planning Board.

Also, in limited quantities, for reference purposes only,

"SUPERIOR KANSAS, An Analysis," setting forth resources and facilities of the state, illustrated with maps and charts.

"KANSAS AIRPORTS AND LANDING FIELDS," illustrated with maps.

For information about these publications, address

KANSAS INDUSTRIAL DEVELOPMENT COMMISSION

STATE HOUSE

TOPEKA, KANSAS

Cases still ineligible for Aid to the Blind	6
Cases eligible for Aid to the Blind.....	0
Amount paid on 6 cases completed.....	\$158.30
Doctors' fees	66.96%
Hospital fees	20.22%
Optical Company fees.....	7.58%
Drugs	5.24%
Total number of cases in which treatment has been completed.....	241
Total number of cases eligible for Aid to the Blind after treatment.....	4
No. of cases still ineligible for Aid to the Blind after treatment.....	237
Total amount paid for treatments, since initiation of program.....	\$10,869.20

KANSAS MEDICAL ASSISTANTS

The following members of The Kansas Medical Society have been appointed to serve as an Advisory Board for the medical assistants: Dr. A. W. Fegly of Wichita, Dr. W. K. Hobart of Topeka, Dr. Robert P. Knight of Topeka, Dr. Philip W. Morgan of Emporia, and Dr. Charles Rombold of Wichita.

Mrs. Marjorie Euler of Topeka at the invitation of the Michigan State Medical Society addressed the initial meeting of the Michigan medical assistants in Detroit on September 24.

Membership cards have been issued to members by the state secretary.

Margaret MacKenzie
President

ANNOUNCEMENTS

The American Board of Obstetrics and Gynecology has announced the written examination and review of case histories (Part I) for Group B candidates will be held in the various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p.m. Formal notice of the place of examination will be sent each candidate several weeks in advance of the examination date. No candidate will be admitted to examination whose examination fee has not been paid at the Secretary's Office. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held in June 1941.

Candidates for re-examination in Part I (written paper and submission of case histories) must request such re-examination by writing the Secretary's Office not later than November 15, 1940. Candidates who are required to take re-examinations must do so before the expiration of three years from the date of their original examination.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting at Cleveland, Ohio, in June 1941, immediately prior to the annual meeting of the American Medical Association.

Application for admission to Group A, Part II examinations must be on file in the Secretary's Office not later than March 15, 1941. After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

The American Board of Ophthalmology announces that there will be only one written examination during 1941. This will be held in various cities throughout the country on March 8th. Candidates enrolled in the Preparatory Group who have been advised that they will be eligible for examination during 1941 should make application at once to take this written examination. Application must be made on the regular blanks provided for the purpose and must be received in the Board Office before December 1st, 1940.

Oral examinations 1941: Cleveland, May or June and October (place to be announced later). Deadline for case reports: February 1st and July 1st.

A special oral and clinical examination will be held on the Pacific Coast during 1941 providing there will be enough candidates to warrant it. Applications for this examination should be filed before September 1st, 1940, so that the Board may complete necessary arrangements.

If you plan on taking your examination during 1941, please write at once to the Board Office, American Board of Ophthalmology, 6830 Waterman Avenue, St. Louis, Missouri, for formal application blanks, indicating your preference of examination place.

The Surgeon General of the Navy, announces that examinations for appointments as commissioned officers in the Medical Department of the Navy will be held January 6-9, 1941. Appointments are being made, Rear Admiral McIntire announces, of male citizens of the United States, who are under fifty years of age, graduates of a class "A" medical school, and who meet the physical and professional requirements. The examinations to be held in January are for appointments as Assistant Surgeon, in the Medical Corps of the regular Navy, effective approximately two months from date of examination, and for Acting Assistant Surgeon (Intern), effective July 1, 1941. Medical officers receive the same pay and allowances as other officers of the Navy in corresponding ranks and the equivalent amount of service. For additional information write: Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

BOOK NOOK

BOOK REVIEWS

GETTING READY TO BE A MOTHER—Carolyn C. Van Blarcom, Revised by Hazel Corbin. Published by the Macmillan Company, New York, 1940. Priced at \$2.50. The book contains the first published reproduction of the plaster models of reproduction by Dr. R. L. Dickinson which were on display at the World's Fair. The photographs are from a Maternity Center showing maternal care. There are also charts, and the newer trends on nutrition. The book should be a solution for the physician who wishes to advise interesting and instructive reading for the young mother.

THE CANNED FOOD REFERENCE MANUAL—Published by the American Can Company, 230 Park Avenue, New York. This small volume of 232 pages



Hotel Jayhawk

TOPEKA ~ KANSAS

Main Dining Rooms and Coffee Shop

Air Conditioned and Refrigerated

Many Private Dining Rooms Available for Special Parties

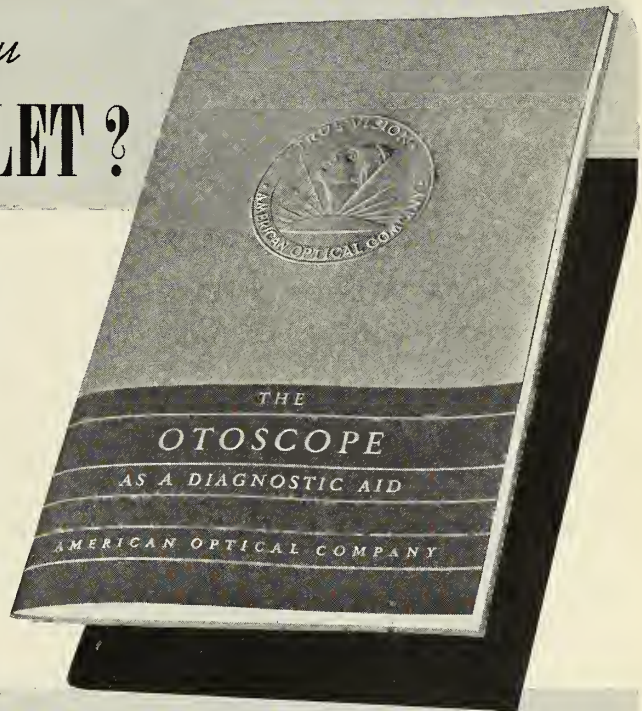
THE MOSBY HOTEL CO.

N. M. Mosby, Pres. & Gen. Mgr.

May we send you

THIS NEW BOOKLET?

A cross-sectional study of ear pathology, written by an outstanding instructing otologist, has been printed for professional distribution by American Optical Company. "The Otoscope as a Diagnostic Aid," while not a compendium of the subject, reviews actual case histories of phases in physiological changes important to diagnosis. Drawings in full color illustrate these histories. Write American Optical Company, Southbridge, Mass., for your copy.



By American Optical Company

Alcohol — Morphine — Barbitol

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the A.M.A.

discusses the history of the canning industry, its growth and development in the past twenty years, and the principles of food preserving. There are chapters devoted to Canned Foods and Human Nutrition, the Public Health Aspects of Canned Foods, Facts about Commercially Canned Foods and ends with a discussion of the Federal Food, Drug, and Cosmetic Act. Included are twenty-three tables on the chemical compositions of foods. Information on securing this publication may be obtained from the American Can Company, 230 Park Avenue, New York.

HANDBOOK OF HEARING AIDS—A. F. Niemoeller, A.B., M.A., B.S., and Foreword by Harold Hays, M.D., F.A.C.S. Published by Harver House, 70 Fifth Avenue, New York, 1940. Price \$3.00. The book is designed for the practical assistance of the deafened. The author discusses appliances and criticizes most of the types, giving his opinion of their merits or lack of value, attempting to help the deafened in the selection of the proper type of appliance at the lowest cost. Explanation of how to use, test, and care for hearing aids is included in this 156 page publication.

GRADUATE MEDICAL EDUCATION IN THE UNITED STATES—Continuation Study for Practicing Physicians, 1937 to 1940. Published by the American Medical Association, 535 North Dearborn Street, Chicago, Illinois, containing 243 pages with a foreword by William D. Cutter, M.D. The book discusses the Progress of Graduate Medical Education with a Survey from 1913 to 1915, a Study in 1919, and in 1922 and 1923 an Inspection of Graduate Schools, the Principles Regarding Graduate Medical Schools, and Graduate Training as Supported by the American Medical Association. Reports are given from the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, and Wisconsin. Data is given on Continued Study for Practicing Physicians in the United States from 1937 to 1940, and this subject is discussed from the angle of Organization and Instruction, the Clinical Conference, Instruction in County Societies, Opportunities, the Commonwealth Fund, Extension Training, the Importance of Postgraduate Medical Education, Graduate Assemblies and Study Courses of Less than Five Days, and Study in the Homes.

MEDICAL NURSING—Edgar Hull, M.D., F.A.C.P., Clinical Professor of Medicine; Louisiana State University School of Medicine; Christine Wright, R.N., B.S., Grad-

uate of Davis-Fisher Sanatorium, Atlanta, Georgia; Instructor of Nursing Arts, Charity Hospital School of Nursing, New Orleans, Louisiana; and Ann B. Eyl, B.S., Assistant Dietitian, Cook County School of Nursing, Chicago, Illinois; formerly Instructor in Home Economics, University of Kentucky, Lexington. Published by the F. A. Davis Company, Publishers, 1940. The book contains 588 pages and 168 illustrations with eleven color plates. In this text the special features of nursing are fully discussed with attention given to nursing and diet of metabolic, allergic and deficiency diseases. The care of disease is discussed from three angles, that of the doctor who directs the treatment, the nurse who administers it and the dietitian who plans and prepares the diet. The book aims to impart to the student nurse an understanding of the specialty of internal medicine and medical nursing, on the theory that medical treatment, nursing care and diet are inseparable.

NEW BOOKS RECEIVED

THE 1940 YEAR BOOK OF PHYSICAL THERAPY—Richard Kovacs, M.D., Professor and Director of Physical Therapy, New York Polyclinic Medical School and Hospital; Attending Physical Therapist, Manhattan State, Harlem Valley State and West Side Hospitals; Visiting Physical Therapist, New York City Department of Correction Hospitals; Consulting Physical Therapist New York Infirmary for Women and Children, Mary Immaculate Hospital, Jamaica, New York; Hackensack Hospital, Hackensack, New Jersey. Published by the Year Book Publishers, Inc., Chicago, 1940. Price \$2.50. Discussion of Physical Therapy Methods and Applied Physical Therapy.

MODERN DERMATOLOGY AND SYPHILOLOGY—S. William Becker, M.D., and Maximillian E. Obermayer, M.D. Published by J. B. Lippincott Company of Philadelphia, Pa., 1940. Containing 461 illustrations and thirty-two full color plates, priced at \$12.00.

APPLIED PHARMACOLOGY—Hugh Alister McGuigan, M.D. Published by the C. V. Mosby Company, St. Louis Missouri, 1940. Price \$9.00. Containing 914 pages, illustrated.

THE PRACTICE OF MEDICINE—Jonathan Campbell Meakins, M.D., LL.D., Professor of Medicine and Director of the Department of Medicine, McGill University; Physician-in-Chief, Royal Victoria Hospital, Montreal; formerly Professor of Therapeutics and Clinical Medicine, University of Edinburgh. Fellow of the Royal Society of Edinburgh; Fellow of the American College of Physicians. The Third Edition, published by the C. V. Mosby Company, St. Louis, Missouri, 1940, contains 562 illustrations, including forty-eight color plates, and 1430 pages. Contents includes the following: Introduction of the Practice of Medicine; Disease of the Nasopharynx and Mouth; Diseases of the Larynx and Bronchial System; Diseases of the Lungs; Diseases of the Circulatory System; Diseases of the

PRESCRIBE OR DISPENSE ZEMMER

Pharmaceuticals, Tablets, Lozenges, Ampules, Capsules, Ointments, Etc. Guaranteed reliable potency. Our products are laboratory controlled.

WRITE FOR GENERAL PRICE LIST
KA 10-40 *Chemists to the Medical Profession*

THE ZEMMER COMPANY

ZEMMER

Oakland Station, Pittsburgh, Pa.

A BRIEF TRIAL SHOULD GIVE A DEFINITE ANSWER



With many forms of medication, a prolonged trial is necessary to determine whether or not the patient is being benefited. This is usually not the case with 'Benzedrine Sulfate Tablets'.

The first few doses are sufficient, in most instances, to determine for the individual patient:

- (1) Whether or not he will benefit by 'Benzedrine Sulfate' therapy.
- (2) The correct dosage for his individual requirements.

It is advisable to begin with a test dose of $\frac{1}{4}$ to $\frac{1}{2}$ tablet ($2\frac{1}{2}$ to 5 mg.) and, if there is no effect, to increase the dosage progressively. The nature of the response to 'Benzedrine Sulfate' therapy is ordinarily apparent after the first few doses.

Careful supervision of the patient during the test period is particularly advisable, and provides the best guide for subsequent administration.

'Benzedrine Sulfate Tablets' have proved useful in depressive states; in post-encephalitic parkinsonism; in narcolepsy; and as an adjuvant in the treatment of alcoholism. In depressive psychopathic states, the patient should be institutionalized.

BENZEDRINE SULFATE TABLETS



Each 'Benzedrine Sulfate Tablet' contains amphetamine sulfate, 10 mg. (approximately $\frac{1}{6}$ gr.)

SMITH, KLINE & FRENCH LABORATORIES, PHILADELPHIA, PA.

EST.  1841

Serous Membranes, Mediastinum and Diaphragm; Diseases of the Hematopoietic System; Diseases of the Gastrointestinal Tract; Diseases of the Liver and Bile Passages; Diseases of Nutrition; Diseases of Metabolism; Diseases of the Ductless Glands; Diseases of the Nervous System; Diseases of the Locomotor System; Diseases of the Urinary System; Infectious Diseases Conveyed by Parenteral Inoculation; Diseases due to Allergy; Diseases due to Abnormal Environments; and Diseases due to Chemicals and Drugs.

GYNECOLOGICAL AND OBSTETRICAL PATHOLOGY, With Clinical and Endocrine Relations—Emil Novak, M.D. With 427 illustrations and 496 pages. Published by the W. B. Saunders Company, Philadelphia, Pa., 1940.

THE BACTERIOLOGY OF PUBLIC HEALTH—George M. Cameron, Ph.D. Published by the C. V. Mosby Company, St. Louis, Missouri, 1940. Illustrated with 451 pages, priced at \$3.50.

MEDICAL NURSING—Edgar Hull, M.D., Christine Wright, R.N., and Ann B. Eyl, B.S. Published by the F. A. Davis Company of Philadelphia, Pa., 1940.

VITAMIN THERAPY IN GENERAL PRACTICE—Edgar S. Gordon, M.D., M.A., Associate in Medicine and Instructor in Physiological Chemistry, University of Wisconsin, and Elmer L. Sevringhaus, M.D., F.A.C.P., Professor of Medicine, University of Wisconsin; Editor, Department of Endocrinology, The Year Book of Neurology, Psychiatry and Endocrinology. Published by the Year Book Publishers, Inc., Chicago, Illinois, 1940. Price \$2.75. The book includes discussion on Vitamines, A, B, and B Complex; Thiamine; Riboflavin; Nicotinic Acid; Vitamine B₆; Choline and Pantothenic Acid; Ascorbic Acid; Vitamines D, E, K; Minerals; Protein; Fuel Foods; Carbohydrate; Fat; Weight Control; Dental Problems in Nutrition; and of Commercial Problems and Laboratory Methods.

METHODS FOR DIAGNOSTIC BACTERIOLOGY—Isabelle G. Schaub, A.B., Assistant in Bacteriology, Department of Pathology and Bacteriology, The Johns Hopkins University School of Medicine and M. Kathleen Foley, A.B., Bacteriologist in Charge of the Diagnostic Bacteriological Laboratory of the Medical Clinic, The Johns Hopkins Hospital Baltimore. Published by the C. V. Mosby

Company, St. Louis, Missouri, 1940. The book contains 313 pages, is divided into three parts, listed as follows: Bacteriological Diagnosis; Serological Diagnosis; and Media, Stains and Straining Technique, Reagents and Tests.

SIMPLIFIED DIABETIC MANUAL, With 163 International Recipes—Abraham Rudy, M.D. Published by M. Barrows & Company, Inc., New York, 1940. Price \$2.00.

SYNOPSIS OF PRINCIPLES OF SURGERY—Jacob K. Berman, M.D. Published by the C. V. Mosby Company, St. Louis, Missouri, 1940. Containing 615 pages and 274 illustrations, priced at \$5.00.

OBSTETRICS IN GENERAL PRACTICE—J. P. Greenhill, B.S., M.D., F.A.C.S., Professor of Obstetrics and Gynecology, Loyola University Medical School, Chicago; Professor of Gynecology, Cook County Graduate School of Medicine; Attending Gynecologist, Cook County Hospital. Published by the Year Book Publishers, Inc., Chicago, Illinois. Price \$3.50. Containing 448 pages, illustrated. Chapters include the following: Antepartum Care; Minor Ailments During Pregnancy; Pregnancy Complicating Medical Ailments; Abortion and Miscarriage; Ectopic Pregnancy; Hydatidiform Mole and Chorionepithelioma; Pyelitis and Ureteritis; Hyperemesis Gravidarum; Toxemias of Pregnancy; Obstetric Pelvis; Mechanism of Labor; Conduct of the First Stage of Labor; Conduct of the Second Stage of Labor; Forceps Delivery and Episiotomy; Breech Extraction; Version; Prolapse of the Cord; Placenta Praevia; Abruptio Placentae; Rupture of the Uterus; Conduct of the Third Stage of Labor; Pathology of the Third Stage of Labor; Use of Pituitary Extract and Ergot; Analgesia and Anesthesia; Local Infiltration Anesthesia in Obstetrics; Cesarean Section; Multiple Pregnancy; Tumors of the Genitalia Complication Pregnancy—Labor and Puerperium; Postpartum Care; Care of the New-Born; Asphyxia Neonatorum; Care of Premature Babies; Puerperal Infection; Roentgenography in Obstetrics; Induction of Labor; Circumcision; Obstetric Endocrinology.

OFFICE UROLOGY—With a Section on Cystoscopy—P. S. Pelouze, M.D., Assistant Professor of Urology, University of Pennsylvania. Published by the W. B. Saunders Company, Philadelphia, 1940. Containing 433 illustrations.

Phone
3-3261

The OVERTON ELECTRIC CO., Inc.

522
Jackson

Specializing in all forms of
FLUORESCENT LIGHTING.



Buy the finest
HY - GRADE
LAMPS—Look
for the Red
Triangle.

AN ELECTRICAL SERVICE
THAT IS COMPLETE.

TOPEKA

S. D. THACHER, President

KANSAS

THE TROWBRIDGE TRAINING SCHOOL

Established 1917

A HOME SCHOOL for NERVOUS and BACKWARD CHILDREN
The Best in the West

Beautiful Buildings and Spacious Grounds. Equipment Unexcelled. Experienced Teachers. Personal Supervision given each Pupil. Resident Physician. Enrollment Limited. Endorsed by Physicians and Educators. Pamphlet upon Request.

1850 Bryant Building

E. HAYDEN TROWBRIDGE, M.D.

Kansas City, Mo.

86c out of each \$1.00 gross income
used for members benefit

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION



Hospital, Accident, Sickness

INSURANCE



For ethical practitioners exclusively
(52,000 Policies in Force)

**LIBERAL HOSPITAL EXPENSE
COVERAGE**

For
\$10.00
per year

\$5,000.00 ACCIDENTAL DEATH
\$25.00 weekly indemnity, accident and sickness

For
\$33.00
per year

\$10,000.00 ACCIDENTAL DEATH
\$50.00 weekly indemnity, accident and sickness

For
\$66.00
per year

\$15,000.00 ACCIDENTAL DEATH
\$75.00 weekly indemnity, accident and sickness

For
\$99.00
per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

\$9,500,000 PAID FOR CLAIMS

\$200,000 deposited with State of Nebraska for
protection of our members.

Disability need not be incurred in line of duty—benefits
from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

Cook County Graduate School of Medicine

(In affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue, starting every two weeks. General Courses One, Two, Three and Six Months; Clinical Courses; Special Courses. Personal Course Thyroid Surgery October 28th. Rectal Surgery every week.

MEDICINE—Two Weeks Course in Gastro-Enterology starting October 21st. One Month Course in Electrocardiography and Heart Disease every month, except August and December.

FRACTURES & TRAUMATIC SURGERY—Informal Course every week. Special Courses may be arranged.

GYNECOLOGY—Clinical Diagnostic and Didactic Course every week.

OBSTETRICS—Two Weeks Intensive Course starting October 21st. Informal Course every week.

OTOLARYNGOLOGY—Informal and Personal Courses every week.

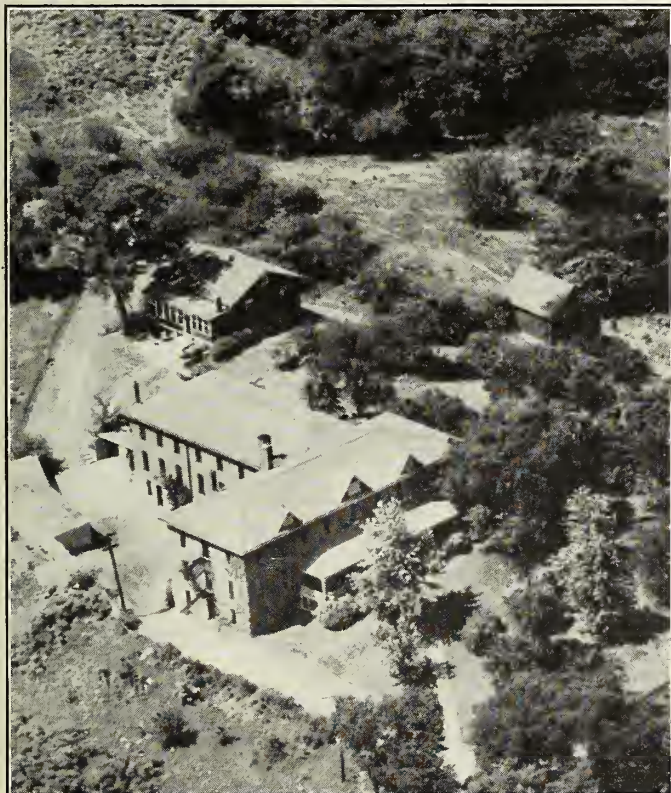
OPHTHALMOLOGY—Informal Course every week. Refraction Course starting October 14th.

ROENTGENOLOGY—Courses in X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

GENERAL, INTENSIVE AND SPECIAL COURSES IN
ALL BRANCHES OF MEDICINE, SURGERY
AND THE SPECIALTIES

TEACHING FACULTY—ATTENDING STAFF OF
COOK COUNTY HOSPITAL

Registrar, 427 South Honore Street, Chicago, Ill.



Grandview Sanitarium

26th & Ridge Ave.

KANSAS CITY, KANSAS

A beautifully located sanitarium,
twenty acres overlooking the 100-
acre City Park, especially equipped
for the care of:

Nervous Diseases

Mild Psychoses

Drug Habit
and Inebriety

The treatment is based on the most
advanced ideas in medicine and is
under competent medical advisers.

City Park Car line passes within one
block of the Sanitarium.

Phone—Drexel 0019

Send for Booklet

E. F. DeVILBISS, M.D., Supt.

Office 1124 Proff Bldg.

KANSAS CITY, MO.

tions, and 766 pages. Chapter headings include the following: Anatomic Structure and Physiologic Function; History-Taking, Examination of the Patient, and Office Procedures; General Diagnostic Methods; Urogenital Symptoms; General Methods of Treatment; Anesthesia and Minor Surgical Procedures; Diseases of the Penis; Diseases of the Urethra; Diseases of Cowper's Glands, Prostate Glands and Seminal Vesicles; Diseases of the Scrotum and Scrotal Contents; Diseases of the Bladder and Ureter; Diseases of the Kidney; The Sexual Problem; Cystoscopy and Roentgenography.

SHOCK, Blood Studies as a Guide to Therapy—John Scudder, M.D. Published by J. B. Lippincott Company, of Philadelphia. Price \$5.50. Containing 315 pages with five plates and fifty-five illustrations.

CHEMOTHERAPY AND SERUM THERAPY OF PNEUMONIA—Frederick T. Lord, M.D., Elliott S. Robinson, M.D., and Roderick Heffron, M.D. Published by the Commonwealth Fund, 41 East 57th Street, New York, N.Y., 1940. Priced \$1.00.

AUXILIARY

PRESIDENT'S MESSAGE

It is pleasant to think of our Auxiliary as a great symphony orchestra. A single instrument played by itself may not be much but if we combine these single instruments under the direction of a conductor they make up the great symphony. There are no soloists in a symphony. The master composer did not plan it that way.

Our conductor, Mrs. Holcombe, has already made a record by organizing her committees early this year so our state chairmen have had their helps for several weeks. They in turn have made their outlines and Dr. West has checked them and you have heard from your state chairman. Now we are ready to combine our efforts and—start the music.

I hope each auxiliary has a very definite idea of what you expect to accomplish this year. Let us not attempt too many things but do a few things well.

Dr. West is eager for each auxiliary to have at least ONE PUBLIC RELATIONS TEA or meeting. He also suggests that we concentrate on a few topics that are before the "lay" mind today such as Socialized Medicine, Cancer Control, Health Education and Preventive Medicine, Syphilis and Immunization. He feels all immunizations should be talked in the various groups at every opportunity.

Hygeia is one of our best educational conveyances. Let's use it.

We are so happy to welcome Montgomery County back to "active service." They have an enthusiastic group and we know they'll do splendid work.

We now have sixteen auxiliaries in the state but need the help of every doctor's wife. We hope you will contact your councilor and tell her you want to help. Write to Mrs. Spake and she will give you her name.

Irma Blasdel (Mrs. T. D.)

NOTES

MONTGOMERY COUNTY TO BECOME ACTIVE

The doctors and their wives of Montgomery County met at the country club at Cherryvale, Sunday evening, Sep-

THE ARNOLD DRUG COMPANY

523 KANSAS AVENUE

TOPEKA, KANSAS

We Have Catered to the Medical Profession for 71 Years With Ethical Products

ELI LILLY—ABBOTT AND SHARP AND DOHME

Nothing Finer Made

WOODCROFT HOSPITAL

PUEBLO, COLORADO

Founded 1896 by Dr. Hubert Work



A modern, newly constructed sanitarium for the scientific care and treatment of those nervously and mentally ill, the senile and drug addicts.

CRUM EPLER, M.D.

Superintendent



The importance of good posture to good health is universally recognized. It is conceivable, that many of your patients who have minor posture defects can be helped by a scientific support. Instead of sacrificing comfort and anatomical regard in quest of current style objectives, they can enjoy improved health and better appearance by wearing a foundation garment *scientifically* designed as an aid in maintaining the proper use of the body.

For thirty years, S. H. Camp & Co. has maintained consistent research to produce garments for *general wear*, as well as for postoperative, hernial, maternity and other prescription conditions; garments which give anatomically correct support to patients with postural problems. Camp Supports promote better posture and produce a pleasing silhouette *safely*. We believe that your consideration of Camp Supports in this light will be helpful to many of your patients.



CAMP
TRADE MARK
Supports

S. H. Camp & Company, Jackson, Michigan



World's Largest Manufacturers of Surgical Supports • Offices in New York; Chicago; Windsor, Ont.; London, England • Expert Camp service is available in good stores everywhere. *Never sold by door-to-door canvassers.*

tember 29, for a picnic supper and while the M.D.'s enjoyed golf and target shooting the wives met and very enthusiastically decided to become active in auxiliary work.

Dr. and Mrs. Charles Miller were guests and Mrs. Miller, who is councilor of the third district, presented objectives of the auxiliary of today. Dr. and Mrs. T. D. Blasdel of Parsons were also guests and Mrs. Blasdel suggested plans for the year.

Mrs. H. O. Bullock, 904 South Fifth Street, Independence was elected president and a meeting date was set when other officers will be elected and committees appointed.

Members from Coffeyville, Independence, Caney, and Cherryvale were present and we are sure this group can make their influence felt in that county.

Read the Bulletin for Auxiliary News—\$1 per year.

Have you mastered the eight-point platform of the A.M.A.? If so you can meet any arguments made for Socialized Medicine.

Every Word of "Look Forward" sent each of us by our National President is worth reading. Have you read your copy? You'll find there the eight points of the A.M.A. platform.

Let's read every article sent out by our National and State Auxiliary. Informed members are interested members.

STAMPS

Your State Auxiliary president visited the Swedish National Sanatorium at Englewood while in Colorado last summer and was very favorably impressed and is confident that any help we may give them by sending our canceled stamps will be well worth our trouble. The stamps are sold to a local dealer in Denver.

Eighteen of the twenty-seven doctors on the staff are members of the A.M.A. and your husbands will agree that many are outstanding in the field of treatment of pulmonary tuberculosis.

We hope each member will save canceled stamps and at our state board meeting in November we shall decide what we want to do with them. Perhaps we'll find a local dealer who will handle them for us.

We know now they are worth saving.

No county auxiliary is too young or small to make itself felt in that locality. In small communities where there is only a single doctor's wife, she, alone, may "Shed light in dark places."

Save canceled stamps for charity. Leave small margin around stamps.

SILVER PICRATE

Wyeth

is indicated in the treatment of

Silver Picrate is a definite crystalline compound of silver and picric acid. Available in the form of crystals and soluble trituration for the preparation of solutions; suppositories; water-soluble jelly; and powder for insufflation.

- ★ Acute Anterior Urethritis
(due to *Neisseria gonorrhoeae*)
- ★ *Trichomonas Vaginalis*
Vaginitis
- ★ Vaginal Moniliasis
- ★ Bartholinitis and Skeneitis
(due to *Trichomonas Vaginalis*)

Complete information mailed on request

★ JOHN WYETH & BROTHER, INCORPORATED ★
PHILADELPHIA, PA.

REPRINT PRICE LIST

Reprints from articles in the
KANSAS MEDICAL JOURNAL

All Reprints are made the same size as
Journal pages, $7\frac{3}{4} \times 10\frac{1}{2}$ inches.
Transportation charges on reprints are
to be paid by the Author

No. Copies	Pages	Without Cover	With Cover
100.....	4	\$ 9.00	\$12.25
250.....	4	9.75	14.50
500.....	4	11.00	17.50
1000.....	4	18.00	26.00

No. Copies	Pages	Without Cover	With Cover
100.....	8	\$12.50	\$16.00
250.....	8	14.00	18.00
500.....	8	16.00	23.00
1000.....	8	21.00	32.00

No. Copies	Pages	Without Cover	With Cover
100.....	12	\$16.00	\$20.50
250.....	12	18.25	23.50
500.....	12	21.25	28.25
1000.....	12	28.00	39.00

CAPPER PRINTING CO.

Capper Building,
TOPEKA, KANSAS

MANY THANKS

For the splendid business you have
been sending us recently.

We hope to continue to merit your
Good Will.

QUINTON-DUFFENS OPTICAL COMPANY

TOPEKA

HUTCHINSON

SALINA

Your Local Independent Wholesaler



OAKWOOD SANITARIUM

The beauty and quietness of the environment of Oakwood Sanitarium cannot be over emphasized. This makes the Institution ideal not only for nervous and mental patients but for convalescents and rest cures as well. Alcoholics and drug addicts are accepted.

Illustrated Booklet and Rates on Request

OAKWOOD SANITARIUM
Tulsa, Oklahoma, Route 6

NED R. SMITH, M.D.
Resident Medical Director

As soon as the date of the National Board meeting is set you will be notified when the State Board meeting will be. It will be held in the home of our state president in Parsons, probably just before Thanksgiving.

Mrs. T. D. Blasdel has been asked to speak this month to the Reno County Auxiliary at a tea in the home of one of its members on the subject "Objectives and Plans of the Auxiliary."

FOR SALE—Ten bed, fully equipped hospital in town of 1700 population. Write Mrs. Florence Funk, Smith Center, Kansas.

FOR SALE—Medical Library, 165 volumes, Tice, Sajous, Dictionaries, Hand-books, etc. Also some laboratory equipment. Write, C. F. Deaver, Sabetha, Kansas.

FOR SALE—McKesson Gas Oxygen machine for use of oxygen and nitrous oxide and four tanks (empty) also a Burdick, Infra Red light. Write Mrs. H. J. Terrill, 205 E. 13th Street, Ottawa, Kansas.

FOR SALE—Complete office equipment for Eye, Ear, Nose and Throat of the late J. Frank McNaught, M.D., Girard, Kansas. Description and prices on request. Mrs. Ethel McNaught, Girard, Kansas.

WANTED—Resident doctor, village and rural practice at Alden in Central Kansas; partially equipped office of late Dr. David T. Muir for rent; good roads; pleasant community; large territory; expenses small; hospitals eight and fourteen miles. Write or call Mrs. D. T. Muir, Alden, Kansas.



The
W. E. ISLE CO.
PHONE VICTOR 2350
2ND FLOOR-1121 GRAND
KANSAS CITY, MISSOURI

ISLE BUILT LIMBS

Approved by the
American College
of Surgeons

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago
Phone Randolph 8855

PROFESSIONAL PROTECTION

**SINCE 1899
SPECIALIZED
SERVICE**

A DOCTOR SAYS:

"By luck I took out your insurance about two weeks prior to treating the case which caused all the trouble. Today I would not practice one day regardless of finances without it."

**THE
MEDICAL PROTECTIVE COMPANY**
OF
FORT WAYNE, INDIANA

THE STOKES HOSPITAL

Established 1904

ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquor withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction, it relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used unless patient desires same.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Hed. Dir.

923 Cherokee Rd., Louisville, Ky. Phone High 2101-2102

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical
Laboratory
Radium
X-Ray

BALYEAT Hay Fever and Asthma Clinic

OSLER BUILDING OKLAHOMA CITY, OKLAHOMA

*DEVOTED EXCLUSIVELY to the DIAGNOSIS
and TREATMENT of ALLERGIC DISEASES*

MEDICAL STAFF

Ray M. Balyeat, M.A., M.D., F.A.C.P.
Director

George R. Felts, B.S., M.D.

Pediatrics

Carl L. Brundage, M.Sc., M.D.

Consultant in Dermatology

Wayne M. Hull, M.S., M.D., F.S.C.P.

Gastroenterology

Onis Geo. Hazel, D.S., M.D.

Consultant in Dermatology

O. Alton Watson, B.S., M.D., F.A.C.S.

Consultant in Otolaryngology

THE Lattimore Laboratories

TOPEKA, KANSAS

J. L. Lattimore, M. D. Director

A. C. Keith, B. S. Chemist

Allen Gold, M. A., M. T.

H. C. Ebendorf, M. T.

We invite consultation about the case that needs pathological service.

Freidman test \$5.00; Rabies treatment \$10.00; Wassermann-Kahn
\$2.00

Containers furnished upon request.

OFFICES:

Topeka, Kansas

El Dorado, Kansas

Sedalia, Mo.

McAlester, Okla.

TABLE OF CONTENTS

NOVEMBER, 1940

ORIGINAL ARTICLES

- The Physician's Responsibility in Industrial Work—Mr. Erskine Wyman, Topeka, Kansas . . . 453
- Ocular Symptoms and Signs in Certain General Diseases—C. S. O'Brien, M.D., Iowa City, Iowa . . . 456
- Management of the Perforated Appendix—E. Raymond Gelvin, M.D., Concordia, Kansas . . . 460
- Cleidocranial Dysostosis—Paul W. Miles, M.D., Kansas City, Kansas . . . 462
- Carcinoma of Cecum Simulating Appendicitis J. B. Stoll, M.D., Clay Center, Kansas . . . 468
- Carcinoma of the Fallopian Tube—Maurice A. Walker, M.D., and Herbert H. Hesser, M.D., Kansas City, Kansas . . . 469

EDITORIALS

- Fiftieth Anniversary 471
- American Red Cross 471
- E Pluribus 471
- American Medical Women's Association . . . 472

MISCELLANEOUS

- President's Page 470
- Cancer Control 472
- Medical Economics 473
- Tuberculosis Control 475
- News Notes 478
- Auxiliary 492

Entered as second-class matter, May 2, 1914, at the Postoffice at Topeka, Kansas, under the Act of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, October 3, 1917. Authorized on July 2, 1918.

THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

EDITORIAL BOARD

W. M. MILLS, M.D., Editor, Topeka

L. E. ECKLES, M.D., Topeka

L. R. PYLE, M.D., Topeka

R. B. STEWART, M.D., Topeka

DON C. WAKEMAN, M.D., Topeka

INFORMATION

Ownership: The Journal is a non-profit publication owned and published monthly by The Kansas Medical Society.

Subscription: Membership in The Kansas Medical Society includes subscription to The Journal. Rates to others, except in foreign countries, are \$2.00 per year or 20c per copy.

Material: Scientific articles, editorials, and data of general interest are invited from all members. Articles are to be submitted on condition that they are contributed solely to this publication. A right is reserved to reject any material deemed unsatisfactory.

Manuscripts: Only manuscripts that are type written on one side, double spaced, and original copies can be accepted.

Manuscripts will be returned upon request.

Advertising: All advertising contracts, and all copy from advertisers under contract are subject to approval of the editorial board. Copy should be received by the 25th of each month to insure publication.

Reprints: Actual cost prices for reprints will be quoted upon request. Reprints should be ordered promptly after publication or forms may not be available.

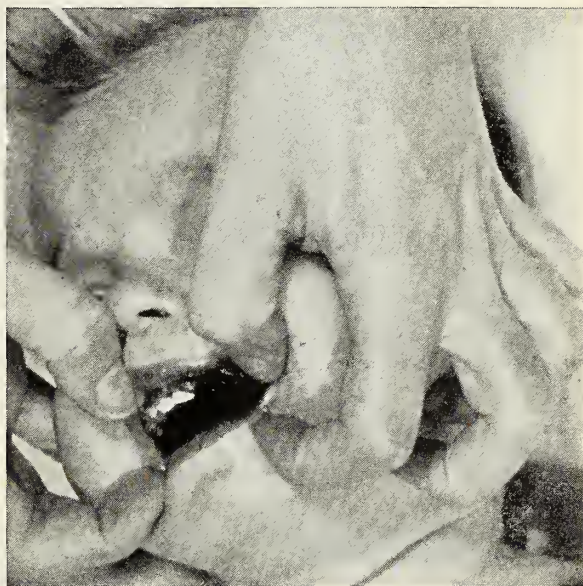
Non-Responsibility: Although an effort is made to publish only accurate articles and legitimate advertisements. The Journal denies legal responsibility for any statements, opinions, or advertisements appearing under the names of contributors or concerns.

STUDIES IN THE AVITAMINOSES



This page is the eleventh of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the November 9 issue of The Journal of the American Medical Association.

The Gingival Manifestations of Vitamin C Deficiency



Gingival lesions are said to be among the most frequent anatomic changes occurring in scurvy. They occur only after dentition has taken place, and are most severe when the teeth are deformed or broken. The pathologic process begins as a hyperemia which is rapidly followed by destruction of the epithelium, and ulceration. Even in the early stages bleeding is readily produced by slight trauma; hemorrhages, while they do not lead to a

great loss of blood, may be prolonged and difficult to control. The gum necrosis is usually accompanied by dental porosity. In the advanced stages of scurvy, the teeth are loosened due to destruction of the alveolar process, and the ulcerative lesions may extend to the mucous membrane of the cheeks and tongue. Gangrene has been described as a sequel of advanced untreated scurvy.

THE KANSAS MEDICAL SOCIETY

OFFICERS

PRESIDENT, F. L. LOVELAND, M.D., Topeka
 PRESIDENT-ELECT, C. D. BLAKE, M.D., Hays.
 PAST-PRESIDENT, C. C. NESSELRODE, M.D., Kansas City
 FIRST VICE-PRESIDENT, HENTY N. TIHEN, M.D., Wichita

SECOND VICE-PRESIDENT, J. L. LATTIMORE, M.D., Topeka
 SECRETARY, JOHN M. PORTER, M.D., Concordia
 TREASURER, GEO. M. GRAY, M.D., Kansas City
 AMA DELEGATE—J. F. HASSIG, M.D., Kansas City, Kansas

COUNCILORS AND COUNCILOR DISTRICTS

FIRST DISTRICT

J. W. Randell, M.D., Marysville, councilor. Marshall, Nemaha, Brown, Doniphan, Pottawatomie, Jackson, Atchison and Jefferson counties.

SECOND DISTRICT

O. W. Davidson, M.D., Kansas City, councilor. Leavenworth, Wyandotte, Douglas, Johnson, Franklin, Miami, Anderson and Linn counties.

THIRD DISTRICT

L. D. Johnson, M.D., Chanute, councilor. Woodson, Crawford, Bourbon, Neosho, Montgomery, Cherokee, Labette, Wilson and Allen counties.

FOURTH DISTRICT

J. L. Lattimore, M.D., Topeka, councilor. Wabaunsee, Shawnee, Coffey, Morris, Osage, Lyon and Chase counties.

FIFTH DISTRICT

M. Trueheart, M.D., Sterling, councilor. McPherson, Stafford, Marion, Barton, Harvey, Reno and Rice counties.

SIXTH DISTRICT

W. P. Callahan, M.D., Wichita, councilor. Chautauqua, Greenwood, Sedgwick, Kingman, Sumner, Butler, Harper, Cowley and Elk counties.

SEVENTH DISTRICT

F. R. Croson, M.D., Clay Center, councilor. Republic, Mitchell, Cloud, Washington, Jewell, Riley and Clay counties.

EIGHTH DISTRICT

L. S. Nelson, M.D., Salina, councilor. Dickinson, Ellsworth, Salina, Ottawa, Geary and Lincoln counties.

NINTH DISTRICT

J. H. A. Peck, M.D., St. Francis, councilor. Cheyenne, Sheridan, Decatur, Wallace, Logan, Sherman, Thomas, Rawlins, Norton and Gove counties.

TENTH DISTRICT

O. A. Hennerich, M.D., Hays, councilor. Osborne, Graham, Russell, Smith, Phillips, Ellis, Trego and Rooks counties.

ELEVENTH DISTRICT

A. C. Armitage, M.D., Kinsley, councilor. Comanche, Hodgeman, Edwards, Pawnee, Kiowa, Rush, Pratt, Barber and Ness counties.

TWELFTH DISTRICT

Geo. O. Speirs, M.D., Spearville, councilor. Hamilton, Stanton, Seward, Wichita, Stevens, Finney, Kearney, Lane, Greeley, Haskell, Meade, Clark, Grant, Scott, Ford, Gray and Morton counties.

Headquarters Office, Columbian Building, Topeka.

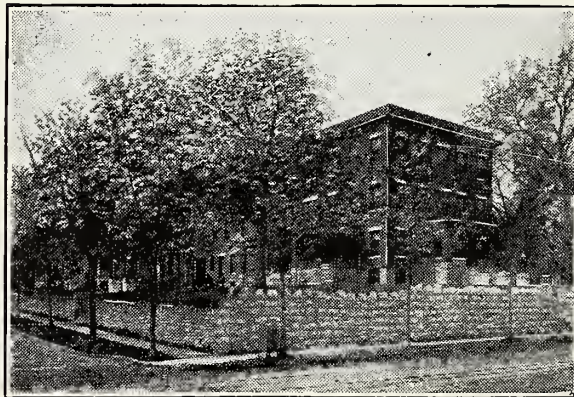
Clarence G. Munns, Executive Secretary.

THE MAJOR CLINIC ASSOCIATION

3100 EUCLID AVENUE

KANSAS CITY, MISSOURI

A Well
 Equipped
 Institution
 for the
 Nervous and
 Mental
 Diseases and
 Drug and
 Tobacco
 Addictions
 Alcohol,



Beautiful
 Location
 Large,
 Well Shaded
 Grounds,
 Spacious
 Porches,
 All Modern
 Methods for
 Restoring
 Patients to a
 Normal
 Condition

HERMON S. MAJOR, M.D.
Medical Director

HENRY S. MILLETT, M.D.
Associate Medical Director

HERMON S. MAJOR, JR.
Business Manager



Pioneers Needed!

When an explorer leaves the beaten path, he never knows what lies ahead.

He may find only barren, worthless wastes. Or he may come upon rich deposits of minerals, or great stands of timber—completely unsuspected.

So it is with the explorer in medical research. Leaving familiar scientific landmarks behind, he never knows whether he will find disappointment, or some new fundamental principle which may greatly benefit mankind.

But in any case, his pioneering has set up significant guideposts for those who follow.

PARKE, DAVIS & COMPANY



Divisions of PARKE-DAVIS RESEARCH LABORATORIES: Pharmacy · Pharmacology · Botany · Organic Chemistry · Nutritional Chemistry · Analytical Chemistry · Microanalytical Chemistry · Physical Chemistry · Biochemistry · Immunochemistry · Endocrinology · Physiology · Histology · Hematology · Allergy · Bacteriology · Pathology · Immunology · Serology · Mycology

COMMITTEES FOR 1940-1941

ALLIED GROUPS TO MEDICAL PRACTICE

George E. Milbank, M.D., Chairman, Wichita; G. A. Finney, M.D., Topeka; W. E. Janes, M.D., Eureka; Geo. E. Paine, M.D., Hutchinson; J. L. Lattimore, M.D., Topeka; R. R. Melton, M.D., Marion; C. D. McKeown, M.D., Wichita; W. Y. Herrick, M.D., Wakeeney; T. P. Haslam, M.D., Council Grove.

AUTOMOBILE ACCIDENTS

Orville R. Clark, M.D., Chairman, Topeka; F. P. Helm, M.D., Topeka; H. P. Palmer, M.D., Scott City; H. P. Jones, M.D., Lawrence; Roy H. Moser, M.D., Holton; F. A. Moorehead, M.D., Neodesha; E. A. Smiley, M.D., Junction City; Hector Morrison, M.D., Smith Center; Fred G. Schenck, M.D., Burlingame.

AUXILIARY

C. Omer West, M.D., Chairman, Kansas City; L. B. Gloyne, M.D., Kansas City; L. A. Proctor, M.D., Parsons; F. E. Coffey, M.D., Hays; J. S. Reifsnider, M.D., Wichita; J. J. Brownlee, M.D., Hutchinson; H. H. Woods, M.D., Topeka; C. C. Nesselrode, M.D., Kansas City; A. C. Dingus, M.D., Yates Center.

CONTROL OF CANCER

H. E. Snyder, M.D., Chairman, Winfield; C. A. Hellwig, M.D., Wichita; J. S. Hibbard, M.D., Wichita; M. B. Miller, M.D., Topeka; Lewis G. Allen, M.D., Kansas City; C. D. Blake, M.D., Hays; F. R. Croson, M.D., Clay Center; M. Trueheart, M.D., Sterling; C. C. Nesselrode, M.D., Kansas City; Karl E. Voldeng, M.D., Wellington; A. K. Owen, M.D., Topeka.

CHILD WELFARE

B. I. Krehbiel, M.D., Chairman, Topeka; Paul C. Carson, M.D., Wichita; Paul E. Belknap, M.D., Topeka; Earl G. Padfield, M.D., Salina; J. A. Wheeler, M.D., Newton; D. M. Medearis, M.D., Kansas City; Paul R. Ensign, M.D., Topeka; F. L. Menahan, M.D., Wichita; T. J. Brown, M.D., Hoisington.

CONSTITUTION AND RULES

A. W. Fegty, M.D., Chairman, Wichita; R. T. Nichols, M.D., Hiawatha; J. E. Henshall, M.D., Osborne; H. E. Haskins, M.D., Kingman; C. M. Nelson, M.D., Oberlin.

DEFENSE BOARD

L. S. Nelson, M.D., Chairman, Salina; James D. Bowen, M.D., Topeka.

ENDOWMENT

H. L. Chambers, M.D., Chairman, Lawrence; F. C. Boggs, M.D., Topeka; E. S. Edgerton, M.D., Wichita; J. L. Grove, M.D., Newton; P. A. Pettit, M.D., Paola; J. T. Reid, M.D., Iola; H. O. Bullock, M.D., Independence; Earl L. Vermilion, M.D., Salina; J. L. Jensen, M.D., Colby.

EXECUTIVE

F. L. Loveland, M.D., Chairman, Topeka; C. D. Blake, M.D., Hays; J. M. Porter, M.D., Concordia; Geo. M. Gray, M.D., Kansas City; C. C. Nesselrode, M.D., Kansas City.

CONSERVATION OF EYESIGHT

Lyle S. Powell, M.D., Chairman, Lawrence; W. M. Scales, M.D., Hutchinson; George Gsell, M.D., Wichita; J. G. Janney, M.D., Dodge City; H. L. Kirkpatrick, M.D., Topeka; H. W. Powers, M.D., Topeka; John A. Billingsley, M.D., Kansas City; C. J. Mullen, M.D., Kansas City; R. E. Chen-y, M.D., Salina; W. W. Reed, M.D., Topeka; W. D. Pitman, M.D., Pratt.

STUDY OF HEART DISEASE

Philip W. Morgan, M.D., Chairman, Emporia; Maurice Snyder, M.D., Salina; James G. Stewart, M.D., Topeka; H. H. Jones, M.D., Winfield; T. T. Holt, M.D., Wichita; C. W. Erickson, M.D., Pittsburg; W. H. Algie, M.D., Kansas City; Porter M. Clark, M.D., Independence; G. M. Edmonds, M.D., Horton.

HISTORY

L. F. Barney, M.D., Chairman, Kansas City; W. S. Iindy, M.D., Topeka; David E. Green, M.D., Pleasanton; G. L. Kerley, M.D., Topeka; F. S. Hawes, M.D., Russell.

HOSPITAL SURVEY

A. R. Hatcher, M.D., Chairman, Wellington; R. H. Kiene, M.D., Concordia; C. E. Joss, M.D., Topeka; M. F. Russell, M.D., Great Bend; Cecil Snyder, M.D., Winfield; L. C. Joslin, M.D., Harper; C. R. Rombold, M.D., Wichita; J. H. A. Peck, M.D., Francis; R. E. Speirs, M.D., Dodge City; Conrad M. Barnes, M.D., Seneca; D. B. Parker, M.D., Ransom.

LOCATIONS

A. C. Armitage, M.D., Chairman, Kinsley; C. F. Young, M.D., Fort Scott; W. R. Morton, M.D., Green; O. W. Longwood, M.D., Stafford; C. W. Inge, M.D., Formoso; D. D. Vermillion, M.D., Goodland; C. A. Gripkey, M.D., Kansas City.

MATERNAL WELFARE

Ray A. West, M.D., Chairman, Wichita; Porter D. Brown, M.D., Salina; L. A. Calkins, M.D., Kansas City; Howard C. Clark, M.D., Wichita; C. O. Merideth, M.D., Emporia; H. R. Ross, M.D., Topeka; Letteer G. H. Lewis, M.D., McPherson; M. D. McComas, M.D., Courtland; Walter H. Weidling, M.D., Topeka; F. L. DePew, M.D., Howard; A. L. Hilbig, M.D., Liberal.

MEDICAL ECONOMICS

H. M. Glover, M.D., Chairman, Newton; I. R. Burkert, M.D., Ashland; W. R. Dillingham, M.D., Salina; J. F. Gsell, M.D., Wichita; B. A. Nelson, M.D., Manhattan; A. J. Revell, M.D., Pittsburg; R. G. Klein, M.D., Dodge City; E. N. Robertson, Sr., M.D., Concordia; F. E. Wrightman, M.D., Sabetha; A. M. McDermott, M.D., Ellis; A. C. Eitzen, M.D., Hillsboro.

MEDICAL SCHOOLS

Fred J. McEwen, M.D., Chairman, Wichita; Fred E. Angle, M.D., Kansas City; Justin A. Blount, M.D., Larned; A. R. Chambers, M.D., Iola; L. R. McGill, M.D., Hoisington; L. F. Schuhmacher, M.D., Dodge City; D. A. Bitzer, M.D., Washington; L. J. Beyer, M.D., Lyons; L. B. Spake, M.D., Kansas City.

NECROLOGY

J. H. O'Connell, M.D., Chairman, Topeka; A. E. Gardner, M.D., Wichita; Henry Haerle, M.D., Marysville.

PHARMACY

R. H. Moore, M.D., Chairman, Lansing; H. W. Duvall, M.D., Hutchinson; J. B. Ungles, M.D., Saranta; E. O. King, M.D., Herington; R. E. White, M.D., Garnett; W. H. Iliff, M.D., Baxter Springs; G. A. Leslie, M.D., McDonald.

PUBLIC HEALTH AND EDUCATION

Earl L. Mills, M.D., Chairman, Wichita; Robert M. Carr, M.D., Junction City; J. N. Sherman, M.D., Chanute; C. T. Moran, M.D., Arkansas City; R. C. Jeffries, M.D., Atchison; Robert Sohlberg, M.D., McPherson; D. R. Davis, M.D., Emporia; N. P. Sherwood, M.D., Lawrence; C. H. Munger, M.D., Emporia; C. C. Hawke, M.D., Winfield; H. C. Sartorius, M.D., Garden City.

PUBLIC POLICY

E. C. Duncan, M.D., Chairman, Fredonia; Hugh A. Hope, M.D., Hunter; L. L. Bresette, M.D., Kansas City; J. F. Hassig, M.D., Kansas City; R. W. Urie, M.D., Parsons; R. G. Ball, M.D., Manhattan; C. A. Dieter, M.D., Harper; E. M. Ireland, M.D., Coats; Herbert Atkins, M.D., Pratt; W. F. Bernstorf, M.D., Winfield; R. W. Van Deventer, M.D., Wellington; J. B. Carter, M.D., Wilson.

SCIENTIFIC WORK

John M. Porter, M.D., Chairman, Concordia; St. Clair O'Donnell, M.D., Ellsworth; R. M. Isenberger, M.D., Kansas City; Maurice A. Walker, M.D., Kansas City; Leslie L. Saylor, M.D., Topeka; J. D. Colt, Jr., M.D., Manhattan; R. I. Canuteson, M.D., Lawrence; T. P. Butcher, M.D., Emporia; E. M. Harms, M.D., Newton.

STORMONT MEDICAL LIBRARY

L. M. Tomlinson, M.D., Chairman, Harveyville; J. M. Mott, M.D., Lawrence; Robert P. Knight, M.D., Topeka.

TUBERCULOSIS

Henry N. Tihen, M.D., Chairman, Wichita; C. H. Lerrigo, M.D., Topeka; C. F. Taylor, M.D., Norton; F. A. Trump, M.D., Ottawa; N. C. Nash, M.D., Wichita; Omer M. Raines, M.D., Topeka; F. C. Beelman, M.D., Topeka; J. W. Spearing, M.D., Columbus; W. G. Reinhart, M.D., Pittsburg.

VENEREAL DISEASE

Arthur D. Gray, M.D., Chairman, Topeka; G. E. Kassebaum, M.D., ElDorado; R. H. Reidel, M.D., Topeka; J. V. Van Cleve, M.D., Wichita; W. J. Singleton, M.D., LaCrosse; Harold E. Neptune, M.D., Salina; C. D. Updegraff, M.D., Greensburg; M. J. Renner, M.D., Goodland; W. L. Pratt, M.D., Leavenworth; George B. Morrison, M.D., Wichita; R. S. McKee, M.D., Leavenworth.

Why Karo for Allergic Infants

1. *Clinical Experience*

KARO has been used for over a generation in infant feeding and yet the medical literature to date reveals no incident of allergy to KARO; hence it may be safely used in the formulas of allergic infants.

2. *Nutrient Composition*

KARO is produced by the conversion of corn starch into mixed sugars and dextrans at high temperature with complete hygienic protection. The large amount of dextrin and the three sugars, maltose, dextrose and sucrose cause no sensitization, and the trace of protein produces no allergic reactions even in corn-sensitive infants.

3. *Digestive Advantages*

KARO is well tolerated, easily digested and not readily fermented. The dextrose and maltose components are quickly absorbed and the difficultly fermentable dextrin is gradually and completely transformed into simple monosaccharides.



IN HIGH CALORIC DIETS

your patients will appreciate knowing the many ways in which Karo can be served. We will send to physicians copies of "49 Delightful Ways to Enjoy Karo"—please specify the quantity you require . . . Address

CORN PRODUCTS SALES COMPANY
17 BATTERY PLACE • NEW YORK CITY

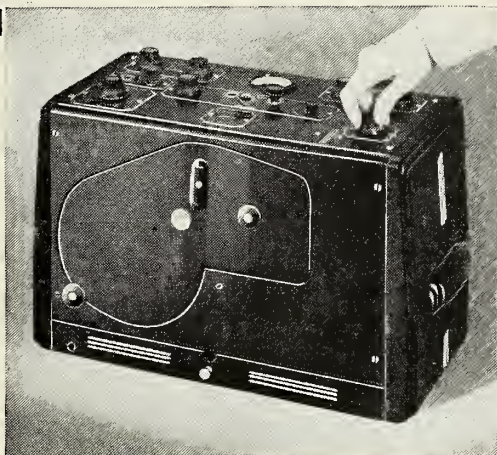
COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Allen	J. T. Reid, M.D.	Iola	O. L. Cox, M.D.	Iola
Anderson	Harold F. Spencer, M.D.	Garnett	John N. Carter, M.D.	Garnett
Atchison	M. T. Dingess, M.D.	Atchison	W. L. Anderson, M.D.	Atchison
Barber	J. M. Gacusana, M.D.	Sharon	K. R. Grigsby, M.D.	Medicine Lodge
Barton	L. R. McGill, M.D.	Hoisington	L. L. Wenke, M.D.	Great Bend
Bourbon	J. J. Cavanaugh, M.D.	Fort Scott	L. E. Ketner, M.D.	Fort Scott
Brown	Ralph M. Wyatt, M.D.	Hiawatha	F. K. Lawrence, M.D.	Hiawatha
Butler-Greenwood	Floyd Dillenbeck, M.D.	El Dorado	W. E. Janes, M.D.	Eureka
Central Kansas	G. C. Unrein, M.D.	Hays	Alza McDermott, M.D.	Ellis
Chautauqua	E. A. Marrs, M.D.	Sedan	Estelle Edwards, M.D.	Cedar Vale
Cherokee	Gregg B. Athy, M.D.	Columbus	W. H. Iliff, M.D.	Baxter Springs
Clay	G. B. McIlvain, M.D.	Clay Center	G. W. Bale, M.D.	Clay Center
Cloud	H. R. St. John, M.D.	Concordia	E. Norris Robertson, Jr., M.D.	Concordia
Coffey	A. N. Gray, M.D.	Burlington	A. B. McConnell, M.D.	Burlington
Comanche	R. A. J. Shelly, M.D.	Coldwater	Lyle G. Glenn, M.D.	Protection
Cowley	N. B. Fall, M.D.	Winfield	F. W. Hall, M.D.	Winfield
Crawford	A. J. Revelle, M.D.	Pittsburg	F. W. Haigler, M.D.	Cherokee
Dickinson	W. A. Klingberg, M.D.	Hope	H. R. Turner, M.D.	Hope
Doniphan	C. E. Waller, M.D.	Troy	Ray Meidinger, M.D.	Highland
Douglas	C. B. Johnson, M.D.	Eudora	J. M. Mott, M.D.	Lawrence
Edwards	W. P. Stoltenburg, M.D.	Kinsley	F. E. Dargatz, M.D.	Kinsley
Elk	R. C. Harner, M.D.	Howard	F. I. Depew, M.D.	Howard
Finney	Sanford Bailey, M.D.	Garden City	H. C. Sartorius, M.D.	Garden City
Ford	C. E. Bandy, M.D.	Bucklin	R. E. Speirs, M.D.	Dodge City
Franklin	J. F. Barr, M.D.	Ottawa	F. A. Trump, M.D.	Ottawa
Geary	W. A. Smiley, M.D.	Junction City	L. S. Steadman, M.D.	Junction City
Harper	L. C. Joslin, M.D.	Harper	P. G. Miller, M.D.	Anthony
Harvey	E. M. Harms, M.D.	Newton	A. G. Isaac, M.D.	Newton
Jackson	E. C. Moser, M.D.	Holton	Roy Moser, M.D.	Holton
Jefferson	J. M. Marks, M.D.	Valley Falls	D. M. Stevens, M.D.	Oskaloosa
Jewell	J. E. Hawley, M.D.	Burr Oak	C. W. Inge, M.D.	Formoso
Johnson	D. E. Bronson, M.D.	Olathe	R. R. Becker, M.D.	Spring Hill
Kingman	Ferd Burnett, M.D.	Cunningham	H. E. Haskins, M.D.	Kingman
Kiowa	C. D. Updegraff, M.D.	Greensburg	W. Errol Wilson, M.D.	Greensburg
Labette	I. A. Proctor, M.D.	Parsons	O. E. Stevenson, M.D.	Parsons
Leavenworth	R. S. McKee, M.D.	Leavenworth	W. L. Pratt, M.D.	Leavenworth
Lincoln	B. A. Higgins, M.D.	Sylvan Grove	W. G. Emery, M.D.	Barnard
Linn	J. R. Shumway, M.D.	Pleasanton	David E. Green, M.D.	Pleasanton
Lyon	C. C. Underwood, M.D.	Emporia	C. H. Munger, M.D.	Emporia
McPherson	Guy Finkle, M.D.	McPherson	A. M. Lohrentz, M.D.	McPherson
Marion	A. C. Eitzen, M.D.	Hillsboro	R. R. Melton, M.D.	Marion
Marshall	Henry Haerle, M.D.	Marysville	Thomas T. Myers, M.D.	Marysville
Meade-Seward	H. W. Davis, M.D.	Plains	R. J. Drake, M.D.	Hugoton
Miami	O. C. Lowe, M.D.	Paola	William Brown, M.D.	Paola
Mitchell	H. B. Vallette, M.D.	Beloit	H. L. Collins, M.D.	Beloit
Montgomery	H. B. Boese, M.D.	Coffeyville	H. O. Bullock, M.D.	Independence
Nemaha	S. M. Meyers, M.D.	Corning	F. E. Wrightman, M.D.	Sabeth
Neosho	J. F. Edwards, M.D.	Chanute	G. L. Ashley, M.D.	Chanute
Northwest	J. L. Jensen, M.D.	Colby	George Marshall, M.D.	Colby
Osage	H. J. Bowen, M.D.	Lyndon	F. M. Smith, M.D.	Lyndon
Osborne	W. W. Miller, M.D.	Osborne	J. E. Henshall, M.D.	Osborne
Pawnee	Charles Starr, M.D.	Larned	C. E. Sheppard, M.D.	Larned
Portawatomie	I. A. Hanks, M.D.	Wamego	L. W. Cazier	Wamego
Pratt	Herbert Atkins, M.D.	Pratt	Atol Cochran, M.D.	Pratt
Reno	J. J. Brownee, M.D.	Hutchinson	C. A. Boyd, M.D.	Hutchinson
Republic	C. V. Haggman, M.D.	Scandia	Paul L. Beiderwell, M.D.	Belleville
Rice	Geo. Meek, M.D.	Little River	Paul Sprong, M.D.	Sterling
Riley			O. M. Heiberg, M.D.	Manhattan
Rush-Ness	J. E. Attwood, M.D.	La Crosse	D. B. Parker, M.D.	Ransom
Saline	Leo Schaefer, M.D.	Salina	George E. Stafford, M.D.	Salina
Sedgewick	R. A. West, M.D.	Wichita	George Gsell, M.D.	Wichita
Shawnee	W. K. Hobart, M.D.	Topeka	F. C. Taggart, M.D.	Topeka
Smith	A. Jeffers, M.D.	Smith Center	V. E. Watts, M.D.	Smith Center
Stafford	C. S. Adams, M.D.	St. Johns	L. G. Graves, M.D.	St. John
Sumner	A. R. Hatcher, M.D.	Wellington	J. Allen Howell, M.D.	Wellington
Wabaunsee	C. L. Youngman, M.D.	Harveyville	L. M. Tomlinson, M.D.	Harveyville
Washington	D. A. Bitzer, M.D.	Washington	F. H. Rhoades, M.D.	Hanover
Wilson	Lynn E. Beal, M.D.	Fredonia	E. C. Duncan, M.D.	Fredonia
Woodson	A. C. Dings, M.D.	Yates Center	H. A. West, M.D.	Yates Center
Wyandotte	F. E. Angle, M.D.	Kansas City	P. E. Hiebert, M.D.	Kansas City

OFFICIAL REPRESENTATIVES

COUNTY	OFFICIAL REPRESENTATIVE	ADDRESS	COUNTY	OFFICIAL REPRESENTATIVE	ADDRESS
Chase	Jacob Hinden, M.D.	Strong City	Morris	C. C. Kerr, M.D.	Council Grove
Cheyenne	J. H. A. Peck, M.D.	St. Francis	Morton	F. H. Buckmaster, M.D.	Elkhart
Clark	I. R. Burkett, M.D.	Ashland	Norton	Walter Stephenson, M.D.	Norton
Decatur	O. A. Hennerich, M.D.	Hays	Ottawa	C. D. Vermillion, M.D.	Tescott
Ellis	Alfred O'Donnell, M.D.	Ellsworth	Phillips	J. L. Shewmaker, M.D.	Phillipsburg
Ellsworth	B. S. Morris, M.D.	Quinter	Rawlins	G. A. Leslie, M.D.	Stockton
Gove	I. B. Parker, M.D.	Hill City	Rooks	F. E. Richmond, M.D.	McDonald
Graham	R. H. Miller, M.D.	Ulysses	Russell	F. S. Hawes, M.D.	Russell
Grant	J. W. Spearing, M.D.	Cimarron	Scott	R. F. Kippenberger, M.D.	Scott City
Gray	J. D. Wilson, M.D.	Tribune	Sheridan	G. W. Hammel, M.D.	Hoxie
Greeley	Charles F. Harrison, M.D.	Syracuse	Sherman	M. J. Renner, M.D.	Goodland
Hamilton	J. B. Ungles, M.D.	Satanta	Stanton	John Allen, M.D.	Johnson
Haskell	C. B. Wycoff, M.D.	Jetmore	Stevens	W. R. Kenoyer, M.D.	Hugoton
Hodgeman	G. R. Hastings, M.D.	Lakin	Thomas	James L. Jensen, M.D.	Colby
Kearney	E. P. Deal, M.D.	Dighton	Trego	W. Y. Herrick, M.D.	Wakeney
Lane	W. F. Deal, M.D.	Oakley	Wallace	Hugo E. Nelson, M.D.	Sharon Springs
Logan			Wichita	L. S. Orr, M.D.	Leoti

Interested in **DEPENDABLE, ACCURATE, PROFITABLE** Electrocardiography?



● As in so many phases of electromedicine, General Electric contributions to the advancement of electrocardiography have been influential ones.

The first thermionically amplified instrument came from G-E laboratories, to revolutionize, by simplifying, the procedure of making electrocardiographic tracings.

Today's G-E Model "B" Electrocardiograph is, in apparatus form, a summation of all that has been demanded by physicians toward perfection of the art of electrocardiography. Consider these outstanding features:

1—Consistent Accuracy: Due to rugged construction, simplicity of control, and elimination of the effects of human variables.

2—Exceptional Sturdiness: Assuring long, useful, dependable operation.

3—Self-Contained: Can be used anywhere; is independent of commercial electric supply.

4—Portable: Ideal for either institution or physician. Can be used in the ward, office, or home.

5—Low Price: Putting it well within the purchasing power of almost every physician and hospital.

Bear in mind, too, this very important fact: the sales and service organization of the manufacturer blankets the United States and Canada. A G-E X-Ray Corporation representative lives near at hand to render intelligent service and advice.

Learn at first hand and without obligation the dependability and desirability of G-E electrocardiography. See the new G-E Model "B" instrument, in your own office, and at your convenience. Operate it yourself. Write, NOW, to our Department A511 saying, "I want to make an Electrocardiogram."

**GENERAL  ELECTRIC
X-RAY CORPORATION**

2012 JACKSON BLVD.

CHICAGO, ILL., U. S. A.



Clinical Research

The practice of medicine takes on fresh appeal as more and more medicinal agents of proved therapeutic value become available. The Lilly Research Laboratories constantly co-operate with a large number of clinicians in the investigation of new substances for treatment of disease.

Liver Extracts, Lilly For Parenteral Use

Names revised to indicate potency in U.S.P. units.

Ampoules Solution Liver Extract, Lilly,
1 U.S.P. unit per cc.

Ampoules Solution Liver Extract, Lilly,
2 U.S.P. units per cc.

Ampoules Solution Liver Extract, Lilly,
15 U.S.P. units per cc.

ELI LILLY AND COMPANY

PRINCIPAL OFFICES AND LABORATORIES, INDIANAPOLIS, INDIANA, U. S. A.

THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

NOVEMBER, 1940

Number 11

THE PHYSICIAN'S RESPONSIBILITY IN INDUSTRIAL WORK*

Mr. Erskine Wyman**

Topeka, Kansas

You have extended a great privilege in allowing me to appear on your program at this convention. Lawyers have the reputation of talking too much and members of the medical profession have the reputation of talking too little. Assembled in convention, however, we understand each other. We know a lawyer is paid to talk for his client, and we know that a medical man must be careful about predicting the uncertainties of the future. A doctor knows that a prescription for relief will work on one patient and will have no effect on the other.

The medical profession should be more interested in the office of Workmen's Compensation Commissioner than any other public department in Kansas, both from a professional and a financial standpoint. The 1939 legislature made the Kansas Commission a separate entity; that is, separated it from the labor department. The Kansas office is operated by one commissioner, two examiners, and an office force of five persons, a total of eight people. Governor Ratter has insisted that heads of departments take steps to cut down expenses, wherever possible to do so without destroying efficiency. When I received the Governor's first letter asking me to submit a proposal as to how I expected to cut down the expense of the operation of the department I forgot it as a routine matter. Within a week I received another letter demanding that I submit forthwith my proposal for cutting down expenses, so it dawned on me he meant business. My office is now operating with one less full-time employee and one part-time employee at a savings of \$175 per month. This has been accomplished by a change in the filing system and the employees working one hour longer each day. These observations are made because as a

citizen and taxpayer you should be interested in the operation of your state government.

The theory of workmen's compensation is not new, nor is it the result of recent social legislation. The first law was passed in Germany in 1884. Austria enacted a law in 1887, and England in 1897. Practically all the countries of Europe, the provinces of Canada and Australia, had enacted laws ten years prior to any attempt in the United States. In 1911, ten states in this country, including Kansas, passed Workmen's Compensation laws. Now, every state, except Mississippi and Arkansas, have laws in operation. Prior to the enactment of compensation laws, the court dockets were clogged with damage suits. Injured employees were left without support for themselves and families, and employers were harassed by defending damage suits in court. The law provides a medium or middle ground in which the injured employee can obtain support during his disability when it is most needed, without long waits in court and excess attorney fees; the employer cannot be sued for damages, and the compensation rate for insurance arrived at is one the employer can carry without undue burden. In Kansas, the act is not compulsory, and the employer can elect not to come under the law, as can the employee.

Now as to the responsibility of the medical man in Workmen's Compensation. Every accident occurring to employees whose employers are operating under the law must be reported to the office of the commissioner. During the year July 1938 to July 1939, inclusive, there were 6,614 accidents causing temporary total disability, 754 causing permanent total and permanent partial disability, and eighty-one fatal cases reported. This is a total of 7,449 cases of accident in Kansas causing disability. Each case, of the some seven thousand, was no doubt treated by a physician at least once, and perhaps several times. It can be seen that a large amount in fees is involved. I am reliably informed that of the total amount of money paid out in Kansas to cover compensation costs, one dollar out of every three goes to the physician. Because these fees come from employers or their insurance carrier, they are almost certain of collection. There are two modes of procedure in which a compensation case may be dis-

* Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 16, 1940.

** Commissioner of Workmens Compensation, State of Kansas.

posed of and closed under the Kansas Act. First, by having a hearing before the commissioner, or examiner, and an award made. Physicians receive extra fees for appearing at the trial of these cases. The other method is a simplified method in which an employer or his carrier can make a settlement agreement with the injured employee and take a final receipt and release of liability. This settlement agreement must be submitted to the commissioner for approval, and must be accompanied by a physician's report, sufficiently definite in form that the commissioner can determine if the proper amount of compensation has been paid. Because the method of disposing of a case by settlement agreement is a convenient, economical, and speedy mode of procedure which can be had without the parties appearing before the commissioner, it is used most extensively. Last year there were 3,342 cases closed by settlement agreement, and each case was approved in accordance with the physician's report attached to the agreement, and in each case, no doubt, the physician was paid a fee for the examination and report. Between July 1, 1938, and June 30, 1939, there were 596 cases heard by the commissioner or the examiners and awards written. In each of these cases a physician's report was submitted or at least one, and in some cases several, physicians personally testified. It is assumed that in each case the physician was paid for his services; at least he was paid or saved some on his income tax.

We have heard a great deal lately of the subject by Dale Carnegie on "How to Win Friends and Influence People" or "How to Improve the Human Relations between Merchant and Customer." The advice is given that if we have nothing good to say about a person, don't say it, because if something critical is said to an individual, that person will always carry a secret resentment against the sayor. It is assumed that the purpose of this convention is both social and educational, and it is hoped that the remarks here made will be taken in the good spirit in which they are intended, and not in any sense critical, but of educational value, and in no wise to be remembered by any of you in case you might at sometime be standing over this individual, clothed in Roman white tunic with nose guard attached and knife in hand. You will understand that the speaker here does not assert that the following few remarks are true, and that all statements made are subject to that debate which is still the heritage of this American democracy. What is here said contains the thoughts that have been expressed by others and not of this person. As far as your connection with Workmen's Compensation, here are some of the opinions that are heard.

Physicians who listen to other physicians testify

in a case are inclined to follow the opinion given by the first physician testifying, especially if they are testifying for the same side of the case. Either because of professional ethics or fear of hurting the feelings of a fellow physician, opinions at a trial are tempered so as to cause the least appearance of disagreement. Physicians are apparently not like lawyers. A lawyer can oppose a fellow lawyer in court all day and they can come to the appearance of blows; yet that night they take their wives and go on a steak roast without the slightest evidence of resentment.

A physician should make up his mind what his honest opinion is, about a given case, and regardless of what his fellow physician might say his opinion is, stick to his own, conscientiously and without reservation.

The thought has been expressed that in some localities groups of physicians align themselves together in their opinions as against groups in other localities or that groups of physicians in one building combine their opinions together as against the opinions of physicians in another building. It has been the feeling of some that physicians who make physical examinations and give treatment to injured men on behalf of employers or their insurance carrier become unconsciously and without intent to do so, influenced in their opinions to the detriment of the injured employee, in that they are inclined to find nothing wrong with a man when he is, in reality, disabled for work.

Another frequent suggestion is that the physician does not give the injured employee credit, for the amount of pain the employee alleges he suffers by reason of the injury and the disability such pain gives him to perform labor. In ninety-nine cases out of a hundred, this complaint is made with reference to a back injury. In this connection it may be brought out here, the complaints which are made against the commissioner himself. The physician should not allow his feelings to be hurt because of suggestions made of his opinions. Because of finally having to make a decision in a case, the commissioner is subject to the complaints of all parties on both sides of a case. It was suggested to the commissioner at one time, that there was no reason for the physician to give his opinion as to the disability in a case for the reason that the commissioner probably would not believe it anyhow. Nothing is further from the truth. In the trial of a back injury case when three physicians on one side render a certain opinion as to the disability and three physicians on the other side render a certain opinion as to the disability, a decision must be made. The commissioner knows that only an opinion is being given and from such opinions he must try to arrive at an

equitable and just conclusion. The fact that opinions are in disagreement is evidence that the physicians expressing such opinions are sincere and independent in thought.

The physician should to the best of his ability, state his opinion as to the percentage of disability and the length of time such disability will last, so as to aid the commissioner in formulating a decision. This should be done even though such opinion does not coincide with other opinions given in the case. The commissioner understands that it is impossible to predict the future. That is the reason the physician should place his testimony on the basis of an opinion and not on the basis that he knows the absolute truth. Some physicians in the trial of cases refuse to give an opinion as to the amount of disability to perform labor or the length of time such disability will last. This should not be done for the reason, that it handicaps the commissioner in formulating his opinion based on all the evidence and it also handicaps the employer and the employee in obtaining competent evidence for the determination of a case. Especially is this true in back injury cases. A fortune must truly await the physician who finally invents a way to discover the amount of pain and disability from work an injured man with a back injury sustains. In the final analysis, it is the commissioner who must take the blame and criticism for any decision made and not the physician.

Just a few words of advice to the physician about testifying from the witness stand. The physician no doubt becomes exasperated, disgusted, and sometimes loses patience at the questions propounded to him, not only by the lawyer, subjecting him to cross examination, but also the lawyer on whose side he is testifying. It is recognized that the questions asked by lawyers sometimes show lack of preparation of his case, or the lawyer tries, too many times, to compound a concoction in a question containing a reference to a medical fact, hooked on to a phase calculated to build his side of the case and make an impression of law on the court or fact on the jury. The physician who makes the best witness is the one who always has complete control of his emotions and gives no outward demonstration of loss of patience with counsel. When you do lose patience or give outward demonstration of emotion you have fallen into the very trap that was laid for you, and make yourself the subject of the humorous side of the practice of law and lessen the effect of your testimony.

May I give some suggestions to physicians who examine and treat patients who have been the victim of industrial accident? Every case the physician treats is more than a mere patient; it represents a

potential lawsuit. For this reason, complete and comprehensive records should be kept of the case at all stages. Reports should contain all information concerning the case and should be forwarded to others interested, with the greatest possible dispatch.

An industrial medical service is tested by the promptness and quality of the reports made. In a compensable case, the industrial physician should make frequent examinations in order to have complete knowledge of the cases at all times. Notes should be made at the time the employee is talking and not afterward from memory.

In this connection, the new physician's report blank should be mentioned at this time. As stated before, last year there were 3,342 cases disposed of by the office through settlement agreement. All these cases had to be passed on by the office, and in each of the cases the physician's report was the guide for determining whether or not proper compensation had been paid. No other appearance is made before the commissioner by anyone, except the physician by way of his written report. You can therefore see, the importance attached to this evidence. The old report contained two small spaces for the physician to describe the injury. Thanks to representative physicians, a report blank was devised and adopted which it is believed is the best form of a physician's report now in existence anywhere. When the new form of medical report was first adopted, it was reported to me that one of my medical friends remarked that he thought I had suffered a mental lapse, but after he learned that the report had the stamp of approval of representatives of this organization, he has since agreed that it is a very fine form of medical report.

In making reports covering amputations, care should be had in reporting the exact point at which the amputation was made, for the reason that the removal of the slightest amount of bone in a joint may affect the amount of compensation due. For instance, the removal of the distal phalange of a finger calls for compensation in the amount of one-half loss of the finger. In treating the amputated member, the removal of the slightest amount of bone in the middle phalange would call for compensation in the amount of two-thirds loss of the finger. Complaint has been made by some physicians that it is necessary sometimes, to form a good pad, that removal of a small portion of the adjoining phalange be made, and that it seems unfair that additional compensation would have to be paid because of the removal of such a small portion of the bone. Physicians should not allow such an instance to influence them whatsoever in giving medical attention to an amputated member for the reason that insurance rates covering workmen's compensa-

tion have been calculated to take care of such instances, and it is the physicians duty to render the best possible service in the form of the treatment given, and it is the commissioner's duty to apply the law and fix the amount of compensation due, so, if it is necessary to remove a small portion of bone, in order to form a good pad, or render the best of medical attention, you should do so, and let the responsibility for the cost rest on those responsible. Do not take on an added burden no one has asked you to take.

Many settlement agreements are made and completed through the medium of the United States mails. Physicians owe a duty to employers and their insurance carriers to answer correspondence directed to them touching all angles of inquiry with the greatest possible dispatch. A case determined by settlement agreement must be closed within twenty days after its submission to the workmen's compensation commissioner. It is sometimes necessary that the commissioner make further inquiry of the employer or his carrier as to the agreement and medical report submitted, and unless the physician gives prompt answer to inquires made, the twenty days will expire and it becomes necessary that the commissioner disapprove the settlement agreements submitted because some physician will not answer his correspondence quickly enough that matters about which inquiry has been made can be submitted.

In conclusion, may I impress upon you the deep respect and admiration the commissioner's office has for the medical profession. It is hoped by these few remarks, our office and your profession will have created an understanding of the problems we both face each day, and that we will always have that sympathy and patience with each other necessary to properly fulfill the obligation of our duties. People from all stations in life congratulate medical science on the advance and progress that has been made by you to alleviate suffering. Much is yet to be done and will be done by you.

May I make this closing observation. It seems to me right now that your greatest opportunity, and that of all of us, is in the field of solving the cause and finding the cure for the mental disturbances of selfishness and greed. The germ enters the body from out of the caverns of unwarranted and solicited discontent; it poisons the mind into delusions of grandeur and belief that force and might is master over all; that all property of whatsoever kind and nature including the established liberties of freedom of speech, religion, individual initiative and personal accomplishment belong to him who is strong enough to take it, either by human strength or under the respectable cloak of legislation. May you discover

the remedy for minds when they become infected with the toxin of hatred that causes men to murder each other, drop bombs on helpless women and children, destroy those things man has taken centuries to build, and finally in the end bring starvation, bankruptcy, and death to themselves.

Any medical man must look upon this world today and pronounce it a mental case. The man of labor, the professional man, the ministers of religious education and their related entities, the rich and the poor give thanks for the progress you have made in your profession, and for the service you have rendered to them in the past, and hope and trust that some day in your laboratories a precipitate will come tumbling down through the liquid in the test tube, that will be a permanent cure for what appears to be a world afflicted with a pestilence of pathological minds.

I thank you again for the privilege of appearing on your program and assure you that I appreciate the fine cooperation always extended by your organization and profession to the Workmen's Compensation Commission.

OCULAR SYMPTOMS AND SIGNS IN CERTAIN GENERAL DISEASES*

C. S. O'Brien, M.D.

Iowa City, Iowa

Many internists and physicians in general practice fail to recognize the importance and value of routine examination of the eyes. Such an examination may lead to a diagnosis or to its confirmation especially in obscure conditions, it is often of assistance in making a prognosis and may point the way to treatment. One who would employ all means of diagnosis should use the ophthalmoscope and be familiar with the appearance of normal and pathological eye grounds. A discussion of the more common ophthalmoscopic and other ocular findings in certain general diseases follows.

DISEASES OF THE VASCULAR SYSTEM

Arteriosclerosis.—Any one or all of the following pathologic changes in the retinal arteries may be observed:

Angiospasm.—Intermittent spasms of the retinal vessels occur in the early stages of arteriosclerosis but are rarely seen with the ophthalmoscope.

Loss of transparency in the arterial walls.—Norm-

*Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 15, 1940.

ally the walls of the retinal arteries are transparent and, hence, invisible with the ophthalmoscope; only the blood stream is visible. However, as the arterial walls thicken they become slightly opaque. The early changes are best seen at points of arteriovenous crossing where the underlying vein is not so well visualized as in the normal fundus. In advanced cases the veins may be entirely invisible at the crossings.

Exaggerated central light reflex along the arteries.—In the normal fundus the larger retinal arteries show a central light reflex, parallel to the long axis of the vessel. This is produced by the reflection of light from the outer and inner surfaces of the vessel wall. With thickening and hyalinization of the media, the light reflex is brighter and is often visible in the smaller vessels. In advanced cases the vessels may assume the appearance of copper or silver wire. A condition known as "beading," i.e., one in which the light streak is irregular or dotted, is of especial importance in the diagnosis of arteriosclerosis.

Variations in calibre.—Normally the arteries gradually become smaller as they extend outward from the nerve head into the peripheral retina. In arteriosclerosis localized variations in calibre occur as a result of changes in the intima, i.e., proliferation of the endothelium. Such proliferations cause attenuation of the lumen and in these areas the arteries appear smaller. In advanced cases the vessels may be completely occluded and are then lost to view, or if the adventitia is also thickened the vessel may appear as a white line peripheral to the point of occlusion.

Arteriovenous crossing changes.—In arteriosclerosis certain changes occur at the points where retinal arteries and veins cross.

Diversion of the vein from its normal course.—Normally the vein passes under or over the artery without any change in course, but with thickening of the arterial walls the vein is somewhat displaced as it approaches and leaves the artery. In advanced arteriosclerosis the vein may run alongside the artery for a short distance, suddenly turn and cross at almost a right angle, and, after crossing, again run alongside the artery before resuming its normal course.

Compression of the vein by the thickened artery.—At points of crossing, the vein may appear compressed and smaller, and occasionally an ampuliform dilatation of the vein is seen just distal to the crossing. This is due to compression of the vein by the thickened arterial wall and to actual extension of arteriosclerotic changes into the walls of the vein. A vein which crosses in front of an artery may be seen to actually bend around the thickened arterial wall.

General diminution in size of the retinal arteries.—Attenuation of all the retinal arteries occurs as a

result of atheroma and sclerosis of the central retinal artery in the area behind the head of the optic nerve. This partial obstruction of the arterial lumen prevents a normal flow of blood into the retinal vessels.

Congestion and increased tortuosity of the retinal arteries.—Although the retinal arteries are normally more or less tortuous, increased tortuosity and congestion may result from an increase in thickness of the arterial walls and also from damming back of the blood as a result of changes in the peripheral arterioles.

White lines along the arteries.—Thickening of the outer coat of the arterial walls results in loss of normal transparency and the appearance of white, translucent or opaque lines along either side of the blood stream. In advanced cases white plaques and pipe-stem sheathing may partially or entirely cover the vessels and the blood stream may not be seen, consequently the artery appears as a white tortuous line in the fundus.

Increased tortuosity and variations in calibre of the arterioles.—In arteriolar sclerosis the small vessels of the nerve head, macular region and retinal periphery show increased tortuosity and variations in calibre. These vessels may become so tortuous that they assume a cork-screw like appearance.

The retinal veins may also evidence changes:

White lines along the veins.—Thickening of the venous walls may account for the appearance of white lines on either side of the blood stream or cells and phagocytes carrying debris from retinal areas of degeneration may migrate into the perivascular lymph spaces and thus render them visible.

Varicosities of the veins.—Localized dilatations in the veins occur particularly in diabetes and arteriosclerosis.

Retinal changes are often evident in the advanced stages of vascular sclerosis. In approximately one-half of the cases such changes are unilateral.

Hemorrhages.—Hemorrhages appear as striate, punctate or irregular red areas of varying size. They are most frequently seen in the region of the nerve head and macula.

Edema.—Retinal edema appears as a light gray veiling or clouding of the fundus. In edema of the nerve head the disc is clouded and elevated, and its margins are soft and blurred. Edema in the area of the macula is seen as a grayish clouding, with accentuation of the normal red color in the region of the fovea.

Areas of degeneration.—These appear as small, white, punctate, sharply-margined areas when located in the internuclear layer of the retina or as relatively large, soft, gray, woolly areas when in the nerve fiber layer. The former are due to colloid,

hyaline or fatty degeneration of the outer plexiform layer and the latter to cyoid degeneration of the nerve fiber layer. Many of these degenerative areas are undoubtedly due to occlusions of the end arterioles. In some cases of arteriosclerosis, thrombosis of the central artery or vein occurs. Venous thrombosis is much more common—the arteries are sclerotic, the veins are large, dark and tortuous, the nerve head and fundus are edematous and blurred, and multiple hemorrhages are found throughout the entire retina.

Sclerosis of the vessels of the chorioid.—Such changes are evidenced by the appearance of white, tortuous, anastomosing, ribbon-like lines underlying the retinal vessels.

It is well known that patients with pure arteriosclerosis and arteriosclerotic retinitis have a longer expectancy than those with renal retinitis. On the other hand arteriosclerosis of the retinal vessels is often an indication of cerebral vascular disease and such patients frequently die of apoplexy.

Commoner types of vascular disease may be recognized by the following findings:

Arteriosclerosis with hypertension, occurring usually in elderly persons.—Oftentimes there is a generalized attenuation and perhaps variations in calibre of the retinal arteries, as a result of atheroma in the central artery as it passes forward in the optic nerve. The central light streak is narrowed but more brilliant and beading is not infrequent; if the vessels are extremely constricted the light streak may disappear. The arterial walls lose their transparency and are visible as gray or white lines on either side of the blood stream. Arteriovenous constrictions are present. In many cases the arteries are straight and the branches leave at unusually acute angles. The veins may show varicosities. Chorioidal arteriosclerosis may be evident. In advanced cases retinal hemorrhages and areas of degeneration are seen here and there over the fundus.

Retinal arteriosclerosis without hypertension.—This is similar to the above but the larger arteries are inclined to be full and tortuous.

Retinal arteriolar sclerosis, associated with renal retinitis.—In the early stages the larger arteries are full and tortuous, their walls are visible, and the light streak is wide and brilliant. Constrictions at arteriovenous crossings are visible. Later the smaller retinal vessels, i.e., the arterioles, which are best seen in the region of the macula, show increased tortuosity, localized variations in calibre, and visibility of the walls; the larger arteries show increased visibility of the walls, variations in calibre, and beading. Edema, hemorrhages, and areas of retinal degeneration are frequent.

Malignant hypertension.—In the early stages, in

addition to the apparent sclerosis of the retinal arterioles, hyperemia and edema of the nerve head and surrounding retina may be seen; there are a few small hemorrhages and white woolly areas of degeneration. Later the edema becomes more extensive, the hemorrhages increase in number and, in the region of the nerve head and macula, small, white, punctate, sharply-margined areas of degeneration appear. A fan or stellate figure may form at the macula.

Recognition of such changes is an aid, not only in diagnosis but also in prognosis and treatment. The prognosis in malignant hypertension, in which the retinal findings are almost paramount, is extremely poor.

Intracranial aneurysm.—This rather rare condition offers great difficulty in diagnosis. The aneurysm usually forms in the region of the circle of Willis and before or after rupture may give rise to one or more of the following symptoms and signs:

Paralysis of the third, fourth or sixth cranial nerve, with limited ocular rotations. Neuralgic pains along the branches of the fifth nerve also occur. Choked disc usually is seen only after rupture of the aneurysm. Retinal hemorrhages may be present in the region of the nerve head. A rapidly developing exophthalmos may occur. The visual field may be reduced by pressure on one or both optic nerves.

Cavernous sinus thrombosis.—One of the pathognomonic signs of this disease is a rapidly developing exophthalmos which begins on one side and within a few hours becomes bilateral. Edema of the lids and bulbar conjunctiva may appear. Immobility of the globe develops as a result of involvement of the third, fourth and sixth nerves as they pass through the sinus.

METABOLIC AND NUTRITIONAL DISORDERS

Diabetes.—Changes in the eyes are common in diabetes, especially in poorly controlled, long standing cases. Oftentimes these ocular changes may lead to the diagnosis of a hitherto unrecognized diabetes. In children, juveniles and young adults cataracts may appear as a complication of this disease. Adults who require frequent changes of glasses should be suspected, since with a high blood sugar there is a tendency to myopia and with lower concentrations of sugar the eyes become more hyperopic. Retinitis is the most common ocular complication of diabetes but is rarely seen in patients under forty years of age. Small, round or irregular, punctate hemorrhages appear in the region of the nerve head and macula, also small yellowish white, discrete or confluent areas of degeneration. Almost invariably there are signs of advanced retinal arteriosclerosis. Venous thrombosis and retinitis proliferans are not un-

common. Edema and softly margined woolly areas such as one sees in malignant hypertension or nephritis are absent unless these diseases appear as a complication of the diabetes. Other rare ocular changes occur in diabetes.

Nephritis.—In advanced stages of chronic nephritis, retinitis is a common finding. It is characterized by the star figure, i.e., elongated sharp, white degenerative areas which radiate outward from the macula, also by small distinctly margined, white degenerative areas in the surrounding regions of the fundus, irregular or flame shaped hemorrhages, softly margined woolly areas of degeneration and edema of the retina and nerve head. Retinal arteriosclerosis is also present.

Toxemia of pregnancy.—Elevated blood pressure, edema and albuminuria are considered to be the pathognomonic signs of toxemia of pregnancy. In addition one should add retinal vascular changes and retinitis. In the early stages spasm of the retinal arteries may be seen; later angiosclerosis, hemorrhages, soft woolly degenerative areas and edema appear in the retina. These changes indicate damage to the vascular system and call for the induction of labor.

Hyperthyroidism.—The typical eye signs of toxic goitre are bilateral exophthalmos, a staring appearance, failure of the upper lids to follow as the eyes look down, poor convergence, infrequent blinking, and pulsation of the central retinal artery. One or all of these signs may be present.

Hypoparathyroidism.—Cataract in children or young or middle aged adults may be seen as a complication of tetany. The adults usually have a history of one or more operations on the thyroid.

Vitamin A deficiency.—Night blindness is a common symptom of vitamin A deficiency. In pronounced cases the conjunctiva and even the cornea may appear dry and lusterless.

BLOOD DISEASES

Pernicious anemia.—Usually the retina appears pale and there are hemorrhages here and there over the fundus. The same may be true of secondary anemia.

Leukemia.—In leukemia there is frequently a complicating retinitis; the fundus is pale, the retinal vessels are large, pale and tortuous and hemorrhages are present. The hemorrhages of anemia and leukemia often have pale yellow centers. In rare cases leukemic infiltration of the lids or orbit occurs; this leads to the appearance of tumors in the lids or to proptosis of the globe.

Purpura hemorrhagica.—Hemorrhages may occur in the lids, conjunctiva or retina.

INFECTIONS

Syphilis.—Interstitial keratitis is one of the most common manifestations of congenital syphilis. It usually occurs in children or juveniles. At the onset one or both eyes become sensitive to light, tearing is profuse and on examination the cornea appears cloudy and vascularized. A Wassermann test should be made in all such cases.

In the secondary stage of acquired syphilis, iritis or retinitis may appear. The iritis is acute and in addition to congestion of the globe redish gray nodules may be seen on the congested discolored iris. Wide adhesions between the pupillary margin of the iris and the lens (synechiae) are characteristic. In the retinitis of secondary syphilis one sees an edematous retina, engorged tortuous vessels and hemorrhages.

Tabes dorsalis and general paresis frequently produce optic atrophy. The nerve head is white, its margins are usually distinct and moderate cupping is present. The Argyll Robertson pupil, i.e., one which does not react to light but does contract in accommodation-convergence, is quite common in tabes. Double vision as a result of paralysis of ocular movements may also occur.

Gonorrhea.—This disease is probably the most common cause of acute iritis. It is more often encountered in chronic cases and frequently comes on with gonorrheal arthritis. There is circumcorneal congestion, the anterior chamber contains cells and fibrin, the iris is discolored and the pupil is small, irregular and inactive.

Tuberculosis.—As a rule the eyes are not affected in active pulmonary tuberculosis but in arrested cases chronic iritis may appear. It is characterized by its chronicity and the large mutton fat deposits on the posterior corneal surface. Intradermal tuberculin tests should be made in suspected cases.

Cerebrospinal meningitis.—Complications such as iritis, or endophthalmitis may be seen. Ocular palsies are not uncommon.

Subacute bacterial endocarditis.—Retinal hemorrhages are common in infective endocarditis. They are usually small and may be found in any part of the fundus.

DISEASES OF THE NERVOUS SYSTEM

Brain tumor.—Most tumors of the brain affect the eyes in one way or another. Bilateral choked discs occur in about eighty per cent of cases; the nerve head is swollen and hemorrhagic and its margins are indistinct. Direct pressure on the nerve may result in optic atrophy. The fields of vision are often affected, e.g., one quite commonly finds an hemianopia or other changes in the fields. Ocular palsies are common. The symptoms and signs depend upon

the location of the tumor. In the presence of headache and vomiting, one should always make a careful examination of the eyes and the visual fields.

Multiple sclerosis.—The ocular symptoms frequently appear in young adults and may be the first sign of the disease. Blurring of vision as a result of retro-bulbar neuritis is common; the fundi appear normal but the field of vision shows a central scotoma. Other scotomas may be present. Ocular palsies are common and nystagmus comes on in the late stages of the disease.

Encephalitis lethargica.—One of the pathognomonic signs is double vision coming on as a result of paralysis of one or more of the extraocular muscles. Ptosis or drooping of the upper lid is common. Nystagmus may be seen.

Myasthenia gravis.—Ptosis may be the first evidence of myasthenia gravis—the lids droop and are elevated with difficulty. Diplopia may occur as a result of ocular muscle weakness or paralysis.

Dystrophia myotonica.—Cataract is not uncommon in this disease.

Poisoning.—The so-called toxic amblyopia of tobacco-alcohol is not uncommon. It usually appears in older men as a bilateral diminution of vision. Visual fields show a central scotoma and in the late stages the temporal side of each optic nerve appears atrophic.

Dinitrophenol, a drug often prescribed for obesity, may occasion bilateral loss of vision as a result of cataracts. The visual loss usually occurs in women and may come on rapidly or gradually.

Other poisons such as methyl alcohol, lead, et cetera often affect the eyes.

MANAGEMENT OF THE PERFORATED APPENDIX*

E. Raymond Gelvin, M.D.

Concordia, Kansas

My only justification for discussing this rather time-worn subject is the fact that people continue to die of appendicitis and appendiceal peritonitis at the rate of eleven in each one hundred thousand deaths.

If each patient with acute appendicitis could have the appendix removed promptly there would be slight need to discuss any other treatment. Unfortunately far too many patients are seen by the surgeon after extension of the infection beyond the appendix has occurred. It is of this group of cases that I wish to speak. The principles of treatment

which I shall present are essentially the principles described by Ochsner and modified somewhat by my senior associate, Dr. Otto Kiene, and used by him for many years. During the past six years we have attempted further modification, which has apparently not influenced the mortality rate to any appreciable degree.

Before discussing treatment I would like to discuss briefly a few of the factors which influence the surgeon in deciding either for or against early or delayed operation. The exciting cause of perforating appendicitis may be divided into two main factors: (1) obstruction; (2) infection. Experimental work by Wangenstein and Bowers, together with clinical observation, demonstrate obstruction playing a major role, especially in the gangrenous perforating variety, bacterial invasion of the injured wall being a secondary event. Obstruction may be due to numerous causes, commonest of these being concretions, swelling of lymphoid tissues, or kinking of the appendix by bands or folds. Eventually over distension of the lumen, plus gangrene of the appendix wall, results in perforation. The above process as a rule requires some thirty-six to forty-eight hours, this time limit, however, is variable. Catharsis by increasing peristalsis invariably speeds up the process, resulting in early perforation.

When perforation of the appendix occurs the peritoneum is inoculated with varying amounts of purulent material containing bacteria, the commonest of which are colon bacilli, hemolytic and non-hemolytic streptococci and *Welchi*, producing an immediate peritonitis, which is at first localized, rapidly spreading to involve the whole peritoneal cavity. As a rule defensive forces operating in the peritoneal cavity are partially at least successful in walling off an acutely inflamed appendix before perforation occurs, the omentum migrates quickly to surround the inflamed viscus, and fibrinous adhesions form, which produce a definite degree of localization. Complete localization will follow in many cases, if given an opportunity. Conservative treatment is definitely indicated in this type of case which we classify as too late for an early operation and too early for a late operation. When death occurs it is due to ileus and toxemia secondary to peritonitis.

In deciding whether or not to operate upon a case of acute appendiceal peritonitis we feel that a certain amount of reliance can be placed upon the length of time which has expired since the patient was stricken. We select those cases for early operation who have been sick not over two days, providing the pulse is under 120, and providing there is no abdominal distension, which we feel is the surest guide to a spreading peritonitis. The leucocyte

*Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 16, 1940.

count varies. It is generally between eighteen to twenty-five thousand. It cannot be used as a criterion to evaluate the spread of the peritonitis. If operation is decided upon, a careful examination of the patient's abdomen is made, with particular reference to the most tender point. This point will govern the placing of our incision. We prefer to remove the appendix through a McBurney incision placed directly over the point of tenderness whenever possible. If the point of tenderness is in or near the mid-line a small right rectus incision is made with subsequent drainage through a McBurney stab. In approaching the appendix, if care is used, it is often possible to open directly over it and to lift it free from the abdomen with very little difficulty. We are extremely careful at all times to protect the general peritoneal cavity with a few well placed abdominal tapes. Removal of the appendix can practically always be accomplished with little soiling of the peritoneal cavity if care is used. We prefer to remove it by the peritoneal cuff method, burying the stump with a few silk sutures whenever possible. A small cigarette drain is placed in the posterior gutter, completing the operation. Post operative treatment is essentially the same as in peritonitis. Briefly the patient is turned on right side for postural drainage, morphine is administered in doses of one-eighth grain at the start, reduced to one-sixteenth grain every two hours for the first forty-eight hours, hot water is allowed liberally by mouth, unless vomiting is present, in that instance fluids are administered by proctoclysis or by intravenous means; no food is allowed by mouth until signs of intestinal peristalsis manifest themselves. If the case has been properly selected, as I have outlined above, and if the operation has been done with minimum soiling of the peritoneum, the post operative treatment will be much simplified, in fact, it seems to me that the battle can be won or lost at the table.

Probably the most important factor in post operative treatment is the maintenance of fluid balance. In the average patient if operation has been carried out as we have outlined above, and if we have selected our time of operation properly, this will be quite simple. The average patient is able to drink enough water and retain it, with the exception perhaps of a little proctoclysis. Collier and his associates found that the average patient loses about 2000 cc. of water by vaporization from the skin and lungs; 1500 cc. of urinary output is needed for normal renal functioning. Thus 3500 cc. is the basic daily requirement. If the patient is vomiting they advise adding enough fluid to equal six per cent of the patient's body weight. For a patient weighing eighty kg. 8300 cc. should be required. It is wise not to exceed this amount of fluid for there is a dis-

tinct danger of producing salt edema and hypo proteinemia. We prefer to let our patients drink water whenever possible.

The type of case presenting the picture of early diffuse or spreading peritonitis is the one in which extreme care must be used in deciding for or against operation. Mortality rates are extremely high by any operative method, even simple drainage. This is the patient we select for conservative treatment, viz: small doses of morphine, one-sixteenth to one-thirty-second grain, administered at two-hour intervals, which has been proven beneficial because it increases the tone of the intestinal wall, prevents excessive dilation with its concomitant intramural compression of the vessels. Hot stupes of plain water are applied for fifteen minutes every four hours, there is evidence to show that heat aids in controlling distension by decreasing secretion in the intestines, and also abdominal pain seems to be relieved by it to some degree.

It is interesting to observe the change in a patient's condition soon after conservative treatment is instituted. Distension diminishes, nausea and vomiting subside, pain decreases, the pulse improves and the temperature becomes normal, as localization progresses within four or five days a palpable mass can be outlined. Optimum time for the late operation must then be chosen, care must be taken not to operate too early, in which case an imperfectly localized abscess might be disseminated again into a generalized peritonitis; operation too long delayed might in a few cases allow intraperitoneal rupture. Occasionally a localized peritonitis may subside spontaneously. With formation of an abscess, however, evidence of a septic process continues, leucocyte count remains above normal and the afternoon temperature remains elevated. Drainage at this stage is indicated, and again we prefer to use the McBurney incision, if it is possible to approach through the apex of the abscess, if not, a rectus incision is used. We do not attempt to remove the appendix, but merely insert a cigarette drainage. After recovery the patient is instructed to return in six months for removal of the appendix. We feel that this method is more safe than to attempt to locate the appendix in a well of pus, and in doing so break down nature's protective wall.

During the past fifteen years there have been 217 cases treated by this method, with a surgical mortality of four per cent, viz: Ten surgical deaths; there were sixteen deaths in patients who were not operated upon, and who received only medical treatment, making a combined mortality of eleven per cent in all. At least half of the cases listed as medical deaths were admitted to the hospital in advanced states of peritonitis, some only surviving for forty-

eight hours. In an effort to evaluate the effect of post operative treatment a series of forty-two cases treated since 1935 were selected who had received intravenous saline, and in which a decompression of the intestinal tract was carried out by means of duodenal suction. Sulphanilamide therapy was also used in four cases. Surgical mortality in this series was 9.5 per cent, and the medical deaths were 4.3 per cent, making a total mortality of 13.8 per cent for this series. It would appear that the difference was probably due to the difference in operative technique, or in the selection of cases.

In conclusion we feel that the Ochsner treatment modified by the modern methods of duodenal drainage and intravenous administration of fluid, together with the removal of the perforated appendix through a McBurney incision, with minimum soiling of the peritoneum should contribute to a lowered mortality.

OUR CASES — PERFORATED — GANGRENOUS AND APPENDICULAR ABSCESS

1925-30	90 cases	4 surgical death (approx. 4.4%)	5 medical death (approx. 5.5%)
1930-35	84 cases	3 surgical death	2 medical death
1935-40	42 cases	4 surgical death (approx. 9.5%)	2 medical death (approx. 4.3%)
Appendicular Abscess	28 cases	1 surgical death	1 recovery without operation

KANSAS STATE — APPENDICITIS

1934	18.3	persons	per	100,000	people	died
1935	14.3	"	"	"	"	"
1936	15.4	"	"	"	"	"
1937	13.	"	"	"	"	"
1938	11.9	"	"	"	"	"

UNITED STATES CENSUS — APPENDICITIS

1925	15.2	persons	per	100,000	people	died
1926	15.	"	"	"	"	"
1927	15.	"	"	"	"	"
1928	15.3	"	"	"	"	"
1930	15.2	"	"	"	"	"
1934	14.3	"	"	"	"	"
1935	12.7	"	"	"	"	"
1936	12.8	"	"	"	"	"
1937	11.9	"	"	"	"	"
1938	11.	"	"	"	"	"

"Air attacks have brought civilians into the same danger from air attacks as soldiers and so the government has made similar arrangements both for the treatment of casualties and for payments for disablement from injury," the regular London, Eng., correspondent of The Journal of the American Medical Association reports in its September 21 issue. "The scheme for civilians applies to members of civil defense organizations injured while on duty and to all other civilians who depend on their earnings for a livelihood. It also applies to immediate dependents if the war injury is fatal. The grants in respect to injury are (1) a temporary injury allowance if the injury causes incapacity for work for not less than seven days; (2) a pension with family allowances if the injury results in serious or prolonged disablement. The temporary injury allowance for a married man is \$8 a week, for a single man \$5, for a woman \$4.50. Pensions for serious or prolonged disablement will be at the same rates as in the fighting services. For permanent disablement a man will receive \$8 a week, a woman \$6."

CLEIDOCRANIAL DYSOSTOSIS

A SURVEY OF SIX NEW CASES AND 126

FROM THE LITERATURE

Paul W. Miles, M.D.

Kansas City, Kansas

Meckel, in 1760, described what is probably the first record of a human being born without clavicles. Morand followed with another in 1766. Stahl, in 1848, described a four and one-half year old child with absent clavicles, persistent fontanelles, and patent frontal sutures. Numerous other descriptions occurred (see Bibliography) before Pierre Marie and Paul Sainton in 1898 named the condition, "La Dysostose Cleidocranienne Hereditaire," and listed four characteristics; aplasia of clavicles, brachycephaly, persistent fontanelles, and hereditary transmission."

Todd, in 1888, prepared a skeleton of a very aged female with absent clavicles, skull changes, and other deformities described minutely by R. J. Terry¹⁶ in 1899. Hultkrantz,¹⁹ in 1908, wrote a monograph on the subject, describing sixty-eight cases and emphasizing skull changes. Later extensive reviews include that of Fitzwilliams in 1910,²³ and of Fitchet in 1929.³⁶ Their extensive bibliographies are not included in this article because of the space required.

In the present review, findings on 132 cases are compared. To these may be added forty-one additional cases described by patients from their immediate families. As cleidocranial dysostosis may not be suspected even after a physical examination has been made, this number should perhaps be larger. Ten cases of an associated type, involving the skull alone, are not included in these figures. Twelve cases of "floating clavicle" by Cyriax, and a case with a diarthrodial joint in the clavicle by Seshachalam, are not included.

CASE REPORTS

Of the seven members of a family living in Kansas, five have cleidocranial dysostosis. Data on the three boys is from direct interview and examination. Other data is from the family physician, and from the oldest son. The maternal grandmother is of German stock in the region of Alsace. The father is a well built, normal man aged fifty-four. His father was Dutch, and his mother Scotch Irish.

Case 1. The mother, aged forty-seven, has cleidocranial dysostosis. She is sixty-two inches tall, and weighs 155 pounds at present. Before her recent operation for toxic nodular goiter, she weighed 140 pounds. Her shoulders are square. She is capable of any lifting or exertion done by other women, but has a limping gait. She has been operated for fibroids



FIG. 1

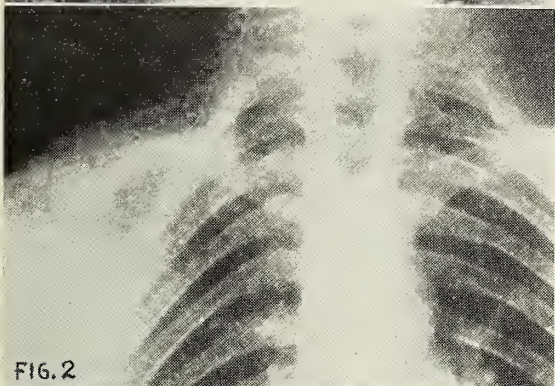


FIG. 2

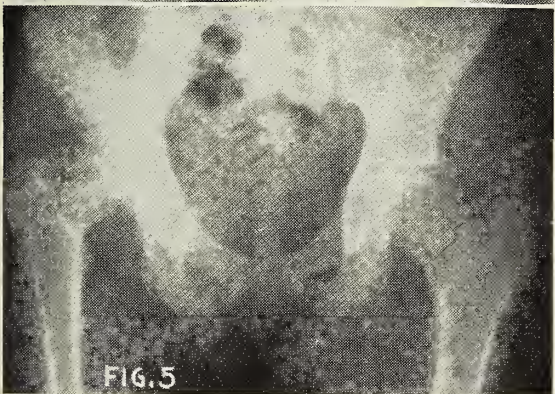


FIG. 5

she can nearly touch her shoulders together anteriorly. He skull is larger and broader than normal, and she has prominent frontal bosses. There is no prognathism, no median frontal fissure. Her face and nasal bones are small, but there is no asymmetry. She has a high narrow arched palate, and irregular teeth. The front teeth have been absent for years, and the remainder were removed in 1939. In the past year, suddenly and without cause, she has lost her hearing and uses a hearing aid.

Case 2. Male, aged twenty-seven, student, weighs 117 pounds, is sixty-four and three-fourths inches tall. He has a large globular skull (Fig. 1.), patent median frontal suture which reaches the bridge of his nose, and a soft anterior fontanelle. His right clavicle is about normal in length, but is arched markedly in the center (Fig. 2.). His left clavicle is slightly shorter, but appears normal in its articulations. There is increased mobility of both shoulder girdles, with a remarkable droop, especially of the right shoulder. The muscles of the neck are all markedly hypertrophied, which he attributes to a job wheeling a barrow of concrete mix for many summers. This musculature may account for his chest expansion, from twenty-nine to thirty-seven inches. An eight inch chest expansion must mark a record. His neck size is fifteen and one-half inches. His chest (Fig. 2) is long and conical. There is slight scoliosis, and the left leg is shorter than the right. He has a definite limp, but walks with a quick swing step.

He has quite prominent frontal bosses with a definite median fissure, and has developed prognathism in the past eight years. When he was aged thirteen, an automobile ran over his head but caused no damage. He believes his soft bones and sutures saved him from a skull fracture. Pictures show that his head was unusually large at the age of four. There was a congenital stump in the region of the left ear, with skin covering the bony canal. There is no hearing. Vision is 20/100 in each eye without glasses. Severe headaches involving the whole cranium for about eight years were attributed to sinusitis, but x-rays have been negative. If these aches be "growing pains" as described by others, their gradual disappearance in the past year may represent further closure of the sutures. Submucous resection was done for marked septum deviation to the right. Nasal bones are normal. Blood pressure is 110/70, pulse sixty-eight. Physical examination is otherwise negative. His intelligence is well over the average.

Dr. Galen M. Tice, radiologist for Kansas University Hospitals and Health Service, reports, "9/26/35, x-ray of the chest shows spina bifida occulta of the upper three thoracic vertebrae. 5/4/37, Skull: There is lack of closure of the cranial sutures. The anterior fontanelle is open. 1/5/40, Upper denture; on the left are two molars unerupted. There is an unerupted third molar and an erupted second bicuspid. The first bicuspid has erupted and serves as a post for a bridge. On the right the bridge is attached to the canine and the first bicuspid. Beneath this bridge the patient's unerupted permanent teeth are visualized. In the lower denture the third molar on each side is unerupted. Both molars and both bicuspids are erupted. The teeth being used by the patient are largely the unexfoliated deciduous set. The permanent set is unerupted between the points mentioned. The deciduous teeth are poorly attached to

Fig. 1. Case 2. Note spherical skull, patent Fontanel and frontal suture.

Fig. 2. Case 2. Note spina bifida occulta, and angulation of the scapula, conical chest, prominent transverse processes.

Fig. 5. Congenital dislocation of the hip and pelvic asymmetry. Clavicle and skull intact.

of the uterus. Her five children were born with no particular difficulty.

Both clavicles are deficient in the lateral half, and

the alveolar process, and are undoubtedly loose."

He states that some of his molars are the "third set."

A sister, aged twenty-five, is married. She is sixty-two inches tall, and weighs 115 pounds. She has intact clavicles, and her head does not resemble that of the others. Her teeth are very poor, the front ones being replaced by a plate. Her palate is narrow and highly arched. She has congenital dislocation of the right hip (Fig. 5) operated in 1919. The femur is shortened by the absence of its neck, and by its higher position on the ilium. There is some pelvic asymmetry. She has a slight scoliosis, and a decided limp.

Case 3. Aged twenty-four, male, he is sixty-three and three-fourths inches tall and weighs 121 pounds. He has bilateral absence of the lateral two-thirds of the clavicles, with highly mobile, almost flexible cartilaginous sternal fragments. He can touch his shoulders together anteriorly. His skull is larger than normal. The anterior fontanelle is soft, sutures are patent, bosses are prominent in the frontal region, and there is a visible median fissure. His face is not relatively small, and there is slight prognathism. There is no exophthalmos, no nasal bone or ear deformity. He has a high narrow arched palate, and his nasal septum is deviated markedly to the right. All upper deciduous teeth were present and all were filled in 1933, but the front ones were recently removed for cosmetic reasons. All lowers are present, and several are filled. There is marked irregularity of size and alignment. Blood pressure is 110/80, pulse sixty.

His neck measures fifteen and one-half inches, and his chest is thirty-three inches. He does the same kind of summer work as does Case 2, and his shoulders droop similarly. Part of this droop is due to hypertrophied neck muscles.

College entrance examinations showed him superior to ninety-one per cent of several hundred new students in intelligence. In reading test, he was above seventy-one per cent.

Case 4. (Fig. 7.) Age twenty-two, male, college student, he is sixty-seven inches tall, and weighs 122 pounds. He has bilateral absence of the lateral two-thirds of the clavicles. The sternal fragments are prominent and firm to palpation, but easily movable on their sternal joints. A membrane or ligament is not palpable. He can nearly touch his shoulders together anteriorly, and there is some droop. He has not done as much heavy lifting as have the older boys. The sternum is angulated. The left shoulder is slightly lower than the right, but there is no noticeable scoliosis. Chest measurement is thirty-four inches, expansion from thirty-one to thirty-seven inches.

The skull is moderately enlarged, the cranium spherical. The anterior fontanelle is open, and sutures not united. There is a definite tendency toward prominent frontal bosses and a median fissure. He has a narrow highly arched palate, but nasal bones and ears are normal. Blood pressure is 110/75, pulse seventy-six. On the entrance examination his ranking was above sixteen per cent of his class in intelligence, and above forty-five per cent in mathematics.

Dr. Tice reports, 2/20/40 (Figs. 7 and 10) "X-ray of the chest and shoulders shows that a short rudimentary clavicle extends out from the clavicular-sternal junction on both sides. This measures approximately two and one-half inches on the left, and two inches on the right. The width of the clavicular stump is about half of that normally seen.

The calcification is poor. There is spina bifida occulta of the upper three thoracic vertebrae. The upper left denture: Two teeth, apparently the lateral incisors and canine are unerupted. These lie beneath the bridge. Upper right denture: Three teeth lie unerupted in the alveolar process beneath the bridge. One lies adjacent to the tooth supporting the bridge. Lower left denture: The canine is present as an extremely short tooth, slightly attached to the alveolar process. Two teeth lie below this in the alveolar process unerupted. Lower right denture: At least four teeth lie in the alveolar process unerupted. The third molar is unerupted."

Case 5. Aged eighteen, female, weighs ninety pounds and is fifty-eight inches tall. She has bilateral absence of the lateral part of the clavicles, but has fairly square shoulders. Her appearance is definitely abnormal, and she walks with a limp. She can touch her shoulders together anteriorly, and is commonly called "double jointed." She has been quite popular in high school as an acrobatic dancer. That her fingers are stubby is easily noticed. Her skull is not unusually large, but she has patent fontanelles, quite prominent frontal bosses, and a visible median frontal furrow. Her nose is normal, but her palate is highly arched. She has irregular dentition, and her teeth appeared late.

It is interesting, as pointed out by Case 2 that no member of this active and laboring family has had a fracture except Case 4, who broke his arm while cranking a car. Healing was rapid. All x-rays show general lack of calcification of the bones. All members of the family have small slender bones, which may be more flexible than normal.

Case 6 is presented by the courtesy of Dr. Frank C. Neff, Professor of Pediatrics, University of Kansas School of Medicine.

Baby L., white female, American, age two days, died January 3, 1932, from birth injuries. She was delivered at full term in the home, never breathed well, and failed to respond to hospital treatment. Both parents are normal, two older children are quite normal and well. The mother had peculiar abdominal pains during gestation which were unlike labor pains, but recurred during labor.

Examination shows a full term infant, in a fair nutritional state, with practically normal muscular development, but with many skeletal abnormalities. The skin shows no abnormal pigmentation, no scars or evidence of trauma. The head is rather block shaped, the antero-posterior diameter being greatly shortened. The nose is flattened. The fontanelles are smaller than normal. (This observation contradicts all others in the literature, but was recorded independently by clinicians and pathologist alike.) The ears and mouth appear normal. The face is slightly Mongoloid in appearance, and is moon shaped. The thyroid gland is not palpable, and vessels are not prominent.

The spine shows a long left scoliosis. The right clavicle is absent entirely to palpation, and the right scapula appears to be absent. The back is otherwise normal. The chest is somewhat flat on the left side due to the scoliosis. The costal angle is acute. The abdomen is bulging in the epigastric region. The umbilical cord is still intact. There are no palpable abdominal masses. External genitalia are normal.

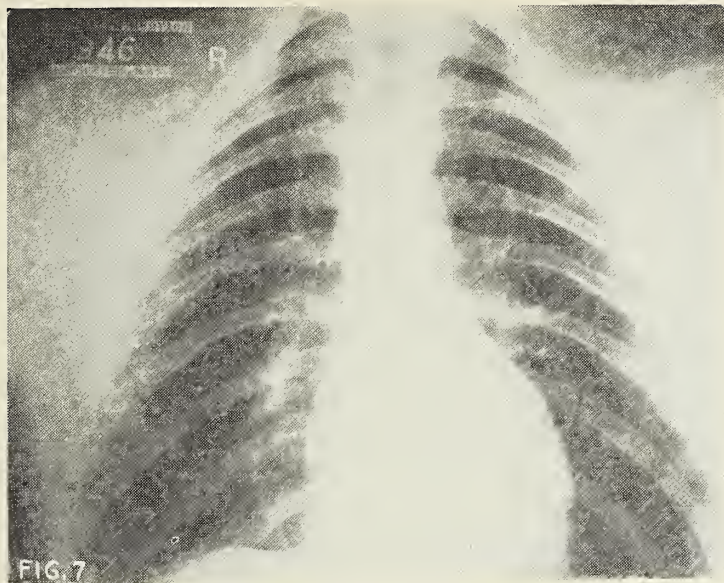


Fig. 7. Case 4. Note the clavicular stumps on the sternum, and the conical chest, and spina bifida occulta.

There is distinct antero-lateral bowing of both femurs and tibia, and the right tibia is thickened as though it might have been fractured and repaired.

Dr. Tice's report, "Postmortem x-ray of newborn shows marked scoliosis of the thoracic spine to the left. There is an absence of the right clavicle and immature development of the right scapula. Each femur, tibia, and fibula shows lateral bowing. Details of the right pelvis are lacking, but irregularity of the ilium indicates lack of development."

Postmortem examination shows the thoracic cavity normal, although the heart is somewhat displaced by the scoliosis. Viscera are in normal relationship. The thymus measures three by two by one centimeters, and weighs about eight grams, and has normal gross lobulation. The heart is normal, with the usual patent foramen ovale and ductus arteriosus. The peritoneal cavity is normal, and viscera lie in normal relationship. Liver, gall bladder, and passages are normal. The spleen is normal. The kidneys show the usual fetal lobulation. Bladder and ureters are normal. The adrenals weigh about ten milligrams per pair, and show very little medullary substance. The gastrointestinal tract is normal. Microscopic examination of all organs is negative except for parenchymatous degeneration of the liver, heart, and kidneys. There is some increase in stroma in the pancreas.

The scalp, periosteum, and calvarium are normal except for the small fontanelles. Meninges, dura, and sinuses are negative. A laceration is found in the falx cerebri in about the central portion two by one and one-half centimeters, but there is no evidence of intracranial hemorrhage.

GENERAL VIEW OF PUBLISHED CASES

The cases originate in nations producing scientific literature: America sixty-three (two colored), Germany fifty-eight, England fifty-three, France forty-one, Sweden nine, other countries twenty-one.

Of the 132 cases, details of which are known, there were eighteen families with an average of three and six-tenths members each which possessed cleidocranial dysostosis. About an equal number of familial cases originated in the father and in the mother. Gegenbaur's case transmitted the defect to all three of her children by two different husbands. Other cases not included in the above figures because of lack of details, include Langsmead's eighteen cases from four generations of one family, Cutter's family of twelve cases, Blencke's family of nine cases, Vogel's family of five cases, and Zilken's family of five in which one daughter produced affected offspring.

However, seventy-one or fifty-three per cent of this series had no family history of additional cases.

Dowse's case had seven siblings, none abnormal. Wulff's case had a father with skull findings, but eleven brothers and sisters were free. This lack of hereditary findings seems as characteristic as presence, although some part of it may be incomplete knowledge of the family.

Cases described averaged twenty-two years of age. Fifty-four were females, sixty-two males. Bilateral clavicular defect occurred 108 times, unilateral thirteen times. The acromial third or more of the clavicle was completely absent in sixty-seven cases. The sternal end of the clavicle was completely absent in twenty-five cases. The most common condition (sixty-eight cases) was presence of poorly ossified slender sternal fragments alone. In eighteen cases, both fragments were long enough to overlap; but never was there callus formation, or rigidity between fragments.

The second characteristic of cleidocranial dysostosis is brachycephaly. In sixty of these cases, the large broad skull was mentioned. Of the thirty-six cases described before 1900, the skull was not described in eighteen. Of the ninety-six cases since, but fifteen failed to have skull findings; and of these only four were examined carefully. Skull changes, therefore, should appear in nearly all cases if sought.

Sutures including the median frontal sutures were widely patent in thirty, and recently joined in thirteen more. On post-mortem, metopic or extra suture lines were seen, and many small Wormian bones occurred. Fontanelles were patent in sixty cases. Ten described, were over forty-five years of age. Skulls of new-borns were fairly normal in size, but

growing children had enlarged crania. The growing brain must attain a larger size than it would have had in a more rigid skull.

Other skull changes included prominent frontal bosses (seventy cases), defective orbital rims, absent or poorly developed nasal and lacrymal bones with a depressed or flat nasal bridge (thirty cases), prognathism (eighteen cases), a narrow highly arched palate (forty-two cases, six of which were completely cleft with intact soft parts and two of which were perforated), and poorly developed maxillae. In Terry's description,¹⁶ the alveolar process of the maxilla was absent. A small maxilla gives insufficient space for dental growth, and explains crowding, delayed eruption of permanent teeth, and "supernumerary" or irregular teeth (Fig. 10).

General body build was small, the average weight given being 120 pounds, and height sixty inches. Five, although short, were quite obese. Five were average in size, one large. Although all cases can fold their shoulders together anteriorly, often to actual contact, they are usually simply called "double jointed," and consider themselves normal. Many interesting illustrations of contortion occur in the literature. The shoulder can be voluntarily pulled

down until the radial pulse is diminished.

A limp may be called almost characteristic of cleidocranial dysostosis, and is usually due to scoliosis (fourteen), contracted pelvis (five), deformed or asymmetrical pelvis (nine), congenital dislocations of the hip (four), or defective feet, pes planus and equinus, club foot (three), poorly developed calcaneus, astragalus, or metatarsal bones. One case had supernumerary toes. Sixteen cases had short fingers, usually due to a "spear head" or very short distal phalangeal bone. Twenty-five had bowed legs, but none were knock-kneed. The scapula was abnormal in twelve, and all bones were slight and poorly ossified. However, but three fractures were mentioned in the group.

Several had multiple dislocations of various joints, six had shoulder dislocations, four had dislocations of the heads of both radii.

Musculature was usually normal or hypertrophied, except for absence of the subclavius muscle. Usually some clavicular fibers of the pectoralis, deltoid, and sternocleidomastoid muscles were absent, but they often inserted on the ligament replacing the clavicle, or on the costocoracoid ligament. Even among asymmetric cases, there was no history of torticollis.

Pathology of the spine included prominent trans-

Fig. 10. Above. Case 2. Lower deciduous teeth still in use, uppers unerupted. Lower. Case 4. Note long central lower incisors and underlying permanent teeth.

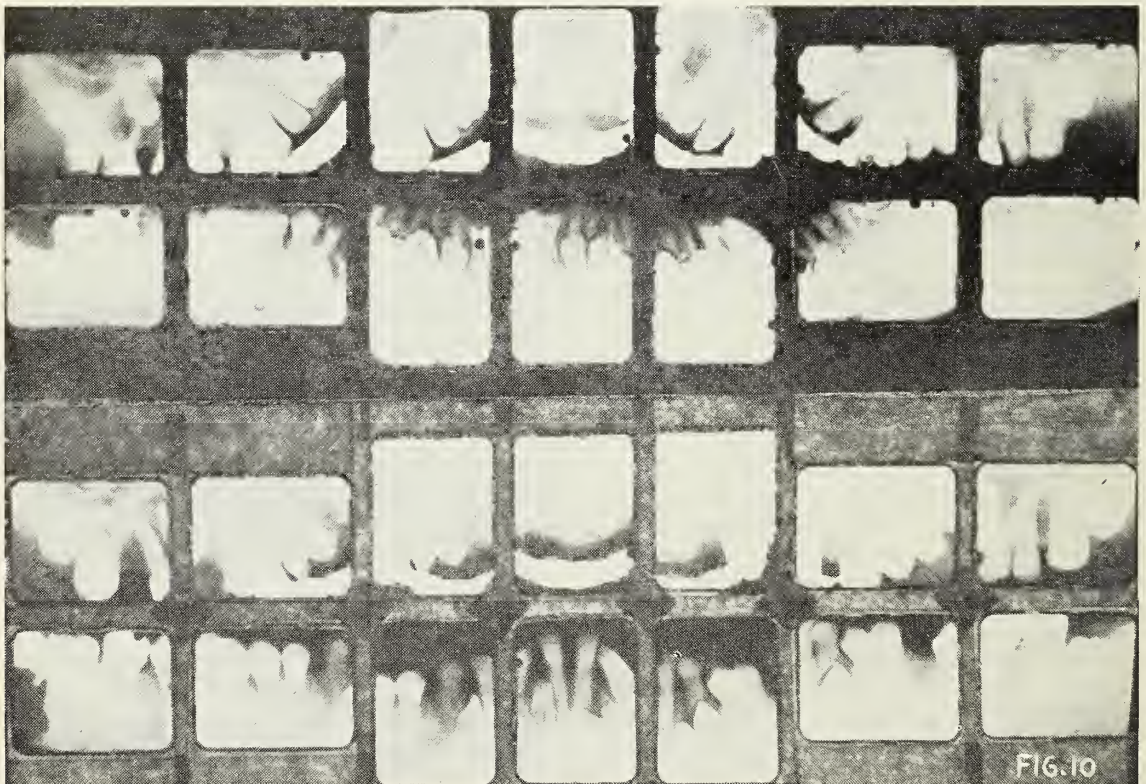


FIG. 10

verse processes of the seventh cervical vertebra (six), one synostosis of cervical vertebrae, defects in laminae (two), separation of sacral vertebrae (one), spina bifida (four), lordosis or kyphosis (nine).

Most cases were said to be above the average in intelligence. Only five cases were considered below normal; two epileptics (one with spondylitis), one cretin, one schizophrenic, one idiot. Four cases which were described as Mongoloid in appearance were too young to determine intellect. Two cases had syringomyelia. One had an alcoholic epileptic father, another a psychoneurotic mother who thought her cleidocranial dysostotic daughter a personification of frogs which by their croaking drove her constantly frantic during gestation. One mother was ill with fever during gestation. One set of parents were first cousins.

ETIOLOGY

The cause of cleidocranial dysostosis is not known. A primary change in parental germ plasm is suggested by several authorities. Fitcher³⁶ is satisfied to call it a developmental aberration of the first weeks of fetal life. The possibility of a deficiency disease like rickets, or a structural deficiency like hemophilia or even diabetes, cannot be ruled out.

The usual explanation is that cleidocranial dysostosis is a disease of membrane bone, the opposite of achondroplasia as a disease of bone originating in cartilage. This fails in consideration of deformities of other bones, as in coxa vara. This decrease in the angle of the neck of the femur is much more rare than its incidence in this series (eight marked cases) would suggest. Moreover, this theory assumes that the clavicle is membrane bone, and modern embryologists agree that the clavicle is not membrane bone. It is known that two ossification centers appear adjacently in precartilagel, and fuse at about the center of the clavicle on the forty-fifth day. One case from the series must have had ossification interrupted after this point, as the adult clavicle was represented by a central bar of bone, sternal and acromial fragments being absent.

Another common explanation is that mechanical injury occurs during gestation or delivery. That the clavicle defects may be due to intra-uterine fracture is unlikely in the absence of attempt at callus formation or healing. It may be possible that an increase in amniotic pressure as suggested by Jansen³⁶ occurs at about the time the affected bones begin development, then recedes before the other bones ossify. This, however, is hypothetical.

Faulty implantation with imperfect fetal nutrition is the explanation of F. P. Mall²⁰ for the more common congenital deformities. In 1908, he published accounts of 438 fetuses that were aborted.

Most of these, he found, were due to faulty implantation. Many fetuses were deformed, but the deformity never resembled cleidocranial dysostosis. Furthermore, there are few records of abortion in these cases of cleidocranial dysostosis, and no incidence of combination with the ordinary types of congenital deformity.

Rickets was said to be present in six of these cases, but rickets can not explain the onset in a fetus of six weeks, the fontanelle persistant into adult life, and the multitude of other characteristic deformities.

Lues, as such, is out of the question. Three cases were luetic in this series. Another had a luetic mother, father, and grandmother, but had a negative serology himself.

Endocrine disease is certainly to be considered. One case had a basal metabolic rate of minus fifteen, another of plus thirty-seven. One free mother had myxedema soon after delivery, another (Case 1) had a toxic nodular goiter. One case was a cretin. The uniform small stature may indicate endocrine influence.

The recent entity, "Wieland's Soft Deformity of the Skull" has not so far been associated with cleidocranial dysostosis.

COMMENT

Whether another article on this subject is in order may be questioned. Anywhere one makes inquiry, one finds ignorance about cleidocranial dysostosis. True, it is a rare condition, is not evidently increasing in incidence, and presents little or no medical problem. But the patient who does occur with the condition asks the doctor many questions. It is certainly comforting to know that anticipated children will not be abnormal mentally, and that they have a fifty per cent chance to be normal physically.

One patient required the support of a body cast. Another was relieved of brachial paralysis by removal of the clavicular fragment. One patient with a coincident contracted pelvis was saved from death by a Caesarean section. Fitcher tells an unverified story that a man in England collected a good living in insurance and law-suits, by allowing his shoulder to be caught in doors of buses, under the wheels of bicycles, etc.

SUMMARY

Cleidocranial dysostosis may be defined as a congenital anomaly which may or may not be hereditary, and consists of a material defect in the clavicles without attempted repair, and a large brachycephalic skull with a tendency for fontanelles and sutures to remain patent.

From the 132 cases studied in this review, it was found that forty-seven per cent consisted of families

in two or three generations nearly all members of which were affected. Fifty-three per cent were isolated non-hereditary cases.

Six of the above cases were new. Five came from one family. New findings include a toxic nodular goiter and myofibromata uteri in Case 1, congenital absence of an auricle in Case 2, spina bifida occulta of the upper thoracic vertebrae in Cases 2 and 4. Cases 2, 3, and 4 have drooping shoulders, long conical chests, hypertrophied neck muscles, and enormous chest expansibility. Case 6 died at the age of two days of birth injuries. She had a negative family history, unilateral absence of the clavicle and most of the scapula, scoliosis, genu valgum, and a block shaped head.

The etiology of cleidocranial dysostosis is not known, but possibilities are discussed.

BIBLIOGRAPHY

1. Meckel, *Memoirs de Paris*, 1760. (From Robert J. Terry, 1899).
2. Morand, *Observations Anatomiques, Histoire de l'Academie Royale des Sciences*, Paris, iv, 47, 1766.
3. Stahl, F. C., *Neue Beitrage zur Physiognomie un Pathol. Anatomie der Idiotia Endemica*, Erlangen, 53, 1848.
4. Stahman, R., *Angebornes Fehlen des linken Schlüsselbeins bei einem Knaben von 9 Jahren*, *Ztschr. f. Med. u. Geburtsh.*, xi, 433, 1857.
5. Gegenbaur, Ein Fall von Erblichem Mangel der pars acromialis Claviculae mit Bemerkungen über die Entwicklung der Clavicula, *Jenaische Ztschr. f. Med. u. Naturw.*, Leipzig, xvi, 1-12, 1864.
6. Dowse, T. S., *Congenital Deformity of Clavicles*, *Trans. of Path. Soc.*, London, xxvi, 166, 1875.
7. Kapeller, Ein Fall von fast totalen Mangel der Schlüsselbeine, *Arch. d. Heilk.*, Leipzig, xvi, 265-269, 1875.
8. Barlow, *Congenital absence of both clavicles and Malformation of the Crenium*, *Brit. Med. J.*, 1, 909, May 12, 1883.
9. Todd, *Absence of Clavicles, Skeleton Preparation*, *St. Louis Courier of Medicine*, xix, 373, 1888. (Same case as Terry, No. 16.)
10. Walsham, M., *Cleidocranial Dysostosis*, *Proc. Med. Soc. London*, xii, 277, 1889.
11. Marie, Pierre and Sainton, Paul, *Observation d'Hydrocephalie (Pere et Fils) par vice de Development du Crane et du Cerveau*, *Bull. et Mem. Soc. Med. d'Hop. de Paris*, xiv, 35, 706, 1897; xv, 436, 1898; *Rev. Neur.*, v, 394, 1897; vi, 739, 1898; vi, 835, 1898. *La Tribune Medicale*, July 23, 1902.
12. Schorstein, Gustave, A Case of Congenital Absence of both Clavicles, *Lancet*, i, 10, Jan. 7, 1899.
13. Carpenter, George, A Case of Absence of the Clavicles with an account of various deformities of the clavicles in five other members of the same family, *Lancet*, i, 13, 1899.
14. Hamilton, W. F., A Case of Congenital Deficiency of both Clavicles, *Phil. Med. J.*, iv, 720, Oct. 14, 1899.
15. King, Alfred, *Congenital Malformation of the Clavicles*, *Annals of Surgery*, xxx, 213, 1899.
16. Terry, Robert J., Rudimentary clavicles and other abnormalities of the Skeleton of a white woman, *Jour. Anat. and Physiol.*, xxxiii, 483, 1899; *Amer. J. Anat.*, i, 509, 1901-1902.
17. Sherman, Harry, *Congenital Absence of the Clavicles, Cleidocranial Dysostosis*, *Amer. Med. Phil.*, v, 569, Apr. 11, 1903. Also *Trans. Am. Orthop. Assn.*, Phil., xv, 386, 1902.
18. Spriggs, E. L., A case with division of clavicles in two halves and other bony deformities, *Lancet*, ii, 1599, 1907.
19. Hultkrantz, J. Wilh., *Ueber Dysostosis Cleidocranialis*, *Zeitschr. für Morphologie und Anthropologie*, xi, 1908.
20. Mall, Franklin P., A Study of the Causes Underlying Human Monsters, *Jour. Morph.*, xix, 3-568, Feb. 1908.
21. Thompson, A. C., Solution of continuity of right clavicle since birth, *Proc. Roy. Soc. Med.*, London, ii, Sect. Study Dis. Child., 20, 1908-9.
22. Miller, R. H., and Poynton, F. J., *Proc. Roy. Soc. Med.*, ii, Sect. Dis. Child., 5, 1908-09; Also 50, 1913-14.
23. Fitzwilliams, Duncan C. L., Hereditary cranio-cleido-dysostosis with review, *Lancet*, ii, 1466, 1910.
24. Boland, Micajah, A case of rudimentary clavicles, *J.A.M.A.*, lviii, 19, 1442, May 11, 1912.
25. Reichmann, Max, *Congenital absence of both clavicles*, *J.A.M.A.*, lix, 1192, 1912.
26. Johns, S. M., *Congenital fracture of clavicles with other faulty bony conformations*, *Journal Lancet*, xxxv, 530, 1915.
27. Stern, Walter G., Report of case of congenital absence of both clavicles, *J.A.M.A.*, 1526, Nov. 15, 1919.
28. Shattuck, C. E., *Dysostosis cleidocranial digitalis*, *Proc. Roy. Soc. Med.*, iv. Clin. Sect., 16, 1922.
29. Krebs, Otto, and Terry, R. J., *Jour. Missouri State Med. Assn.*, xix, 522, 1922.
30. Cocker, A. B., Sims, H. S., A case of craniocleido-dysostosis, *Lancet* i, 595, 1923.
31. McCurdy, I. J., Baer, R. W., Hereditary cleidocranial dysostosis, *J.A.M.A.*, lxxxi, 9-11, July 7, 1923.
32. Cyriax, Edgar F., A case of cleido-cranio-dysostosis, *Edin. Med. J.*, xxx, 600, 1923; A brief note on floating clavicles, *Anat. Rec.*, lii, 97, Feb. 25, 1922.
33. Krabbe, K. H., Foged, J., *Cleidocranial Dysostosis cleidocranialis with metabolic disturbances*, *Jl. Nerv. & Mental Dis.*, lxi, 18, 1925.
34. Pillsbury, H. C., *Congenital Absence of Clavicles*, *Am. J. Roentg. and Radiology*, xviii, No. 4, 322, May 1927.
35. McBride, Earl D., *Congenital deficiency of the Clavicle, Hereditary Cleidocranial dysostosis*, *Jl. Bone and Joint Surg.*, ix, 545, 1927.
36. Fitcher, S. M., *Cleidocranial dysostosis, hereditary and familial*, *Jour. bone and Joint Surgery*, xi, 838-866, Oct. 1929.
37. Stewart, R. N., *Nervous system in cleidocranial dysostosis, report of case*, *Jour. Neurol. and Psychopath.*, ix, 217-221, Jan. 1929.
38. Kelley, Arthur, *Hereditary absence of Clavicles*, *Jour. Heredity*, xx, 353, 1929.
39. Pierre, L. Saint, *Congenital psuedarthrosis of right clavicle, a Case*, *Ann. d'Anat. Path.*, vii, 625, May 1930.
40. Klemmer, R. N., Snoko, Paul O., and Cooper, H. K., *Cleidocranial dysostosis, a case*, *Am. J. Roentg. and Radium Ther.*, xxvi, No. 5, 711, Nov. 1931.
41. Biswanger, *Dysostosis Multiplex*, *Ztschr. f. Kinderh.*, liv, 699, 1933.
42. Leopold, Jerome S., and Castrovinci, Frederick, *Am. Jour. Dis. Child.*, 46, 113, 1933.
43. Strauch, August, *Cleidocranial Dysostosis*, *Arch. of Pediatr.*, li, 714, 1934.
44. Seshachalam, T., *Clavicle in two parts*, *Indian Med. Gazette*, lxii, 10, 593, Oct. 1936.
45. Davis, Wolfe, and Flecker, H., *Congenital absence of clavicles*, *Med. Jour. Australia*, ii, 533, Oct. 1938.
46. Liebman, Chas., Newman, B., and Freedman, *Anomalies of the clavicle with a previously unreported variation*, *Radiology* xxxi, 345, Oct. 1938.

CARCINOMA OF CECUM SIMULATING APPENDICITIS

J. B. Stoll, M.D.

Clay Center, Kansas

The following case is of interest because of an error in diagnosis resulting in a favorable prognosis.

The patient is a nice German lady of sixty-nine, physically and mentally many years younger. Her only ill health in the past has been severe muscular rheumatism lasting one year and completely relieved by removal of pus-filled tonsils in August 1939.

On December 13, 1939, she came in saying that three weeks ago she had three days of crampy pains in the lower abdomen, mild and unassociated with other symptoms. These have recurred, and last night were very severe, with nausea but no bowel symptoms. Her general physical and cardio-vascular condition is excellent, the only physical sign of importance being a definite but mild tenderness under McBurney's. A diagnosis of mild appendicitis warranted delay, but the next day a continuation of the pain and a very sensitive McBurney's together with a white count of 11,700, twenty-eight per cent stabs, and a temperature of 99.5 made further delay seem unsafe. Under spinal anesthesia and thru a muscle and fascia splitting incision an innocent looking appendix was removed. On exploring further a very firm mass was found in the mesial wall of the cecum just above the ileo-cecal junction. No metastatic growth was evident. The ileum was severed three inches from the cecum, the distal end closed and the proximal end joined end-to-side to the mid-transverse colon.

Three weeks later she again entered the hospital.

Again under spinal, the right colon was removed up to the ileo-colic anastomosis. The only suggestion of metastatic lesions were several lymph nodes adjacent to the cecum. These on pathological examination by Dr. J. L. Lattimore were found to be inflammatory. The mass in the cecum proved to be a cauliflower growth measuring $1\frac{3}{4}$ by $2\frac{1}{2}$ inches and reported by Dr. Lattimore as a papillary adenocarcinoma. Why it should have caused such symptoms at this early stage is problematical. Her convalescence was marred by a complete wound rupture on the third day (rare when silk is used) which was repaired under Evipal intravenous anesthesia with thru and thru silk sutures. Healing was without infection, and the patient has resumed considerable activity and reports no complaints. The prognosis, thanks to the early symptoms, is good.

Ten months later there is no sign of recurrent trouble. Patient is healthy and active.

CARCINOMA OF THE FALLOPIAN TUBE*

REPORT OF TWO CASES

Maurice A. Walker, M.D.

Herbert H. Hesser, M.D.

Kansas City, Kansas

Carcinoma of the fallopian tube constitutes less than 0.5 per cent of all tumors arising in the urogenital system. The greatest incidence lies between the ages of forty and fifty, although cases have been reported in individuals from eighteen to seventy-three years of age. Chronic inflammation is believed by some to predispose to this condition. Patients rarely survive three years after operation. The cases to be described by us illustrate the difficulty of diagnosis before operation and the poor prognosis.

CASE 1

A widow, aged sixty-eight, was examined by one of us in November, 1934. She had had dribbling of urine for several years. She had noticed a sensation of pressure in the vagina for several months, and had been unable to void on several occasions during the month prior to examination.

She had never been seriously ill. The menopause had been completed at the age of fifty-two. A history of inflammation in the pelvis could not be elicited. She had had two children, both living and well. Her mother had died of cancer of the uterus, and her father of cancer of the stomach.

There was a soft mass in the left lower quadrant of the abdomen, extending half way to the umbilicus. The bladder protruded from the vagina. A mass could be felt extending into the anterior wall of the vagina continuous with the mass in the abdomen. A diagnosis of ovarian cyst was made.

At operation at St. Margaret's Hospital on November 19, 1934, the left tube was the size of a large grapefruit, densely adherent to the posterior surface of the uterus and to the sigmoid. The uterus was pushed forward, which had apparently caused the symptoms referable to the bladder. After removal, the tube was found to contain gray gelatinous material. The left ovary was normal, and attached to the posterior surface of the mass formed by the tube. The right tube and ovary were normal. Histologic examination showed carcinoma of the tube.

Although the immediate convalescence after operation was satisfactory, the patient never regained her strength. She suffered intermittently from distention and partial obstruction of the sigmoid. She died July 8, 1935, of generalized peritonitis. At autopsy there were metastases in the peritoneum, liver, and left supraclavicular lymphnodes.

CASE 2

A married woman, aged forty, was admitted to St. Margaret's Hospital on March 12, 1939. For two years she had had increasing lower abdominal pain, vaginal discharge, nervousness, and hot flashes. Her menses had been regular, but the flow was gradually diminishing.

From her history, it seemed probable that she had had an acute pelvic inflammation at eighteen. After a blood test at the age of thirty, she was told that she had syphilis, for which she subsequently had some treatment. A vulvo-vaginal abscess had been incised at thirty-seven. She had never been pregnant. The family history was not significant.

There was some tenderness in the lower abdomen. Moderate leukorrhea was present. From the vagina, tender rounded masses could be felt in each tubo-ovarian region. Her temperature was 101. The sedimentation rate was slightly increased.

A diagnosis of bilateral tubo-ovarian abscesses was made. After a rest in bed for ten days with a warm douche each day, her temperature did not rise above normal. At operation on March 22, what seemed to be bilateral tubo-ovarian abscesses were freed from their fibrous adhesions and removed. The left was eight cm. in diameter, the right six cm. The right tube contained yellow pus. The left contained a firm homogeneous gray material. Histologic examination of the left tube showed carcinoma.

Roentgen therapy was given. When examined on June 10, a mass could be felt in the pelvis surrounding the rectum and almost completely obstructing it. Her general condition failed rapidly. In August, the operative wound became inflamed and opened with fecal drainage. At death on October 25, 1939, the carcinoma had extended to fill her pelvis, obstructing the rectum and both ureters.

The individual physician must protect the families in his care, and through them the community, by urging physical examination of domestic employees. Repeated emphasis on the necessity of this should result in the earlier diagnosis of tuberculosis and in the prevention of exposure to infants and children from this source of infection. An annual health certificate declaring freedom from syphilis, gonorrhea and tuberculosis should be the requisite for the position of nursemaid. David V. Shar, M.D., *Journal-Lancet*, June, 1940.

*From the Department of Surgery, University of Kansas School of Medicine.

President's Page

To the Members of The Kansas Medical Society:

We have recently passed another milestone in the affairs of our government. A majority of our voting population have voiced their sentiments in favor of the present order of things. A very substantial minority of our people, however, have voiced a vigorous opposition to many apparent objectives of the program.

Honest differences of opinion always have and always will prevail. Within reasonable limits, such opinions, at variance though they be, may be sufficiently stimulating to serve as an honorable means to a successful end.

In victory or defeat we must preserve at all cost the democratic privilege of voicing our opinions. Such procedure is typical of our American way of life. It is a priceless heritage which must not be destroyed.

Co-operative and loyal opposition is possible. It is openly manifest in our country today. May it serve as a balance wheel or as a guard against allowing emotions and prejudices to supercede good judgment and reason.

As men of medicine we believe whole heartedly in good government. We believe also in the theory of more reason and less government.

Politically dominated medicine has failed wherever it has been tried and as a profession we are interested in preventing its establishment in this country. We are opposed to any program which contemplates such an effort.

We must continue to oppose any legislation which contemplates the placement of medical responsibility into the hands of a politically dominated bureau.

Above all things our interest lies in raising medical standards. We shall continue to work to this end.

Sincerely,

Lawrence Loveland M.D.

President, The Kansas Medical Society.

EDITORIAL

FIFTIETH ANNIVERSARY

The Journal welcomes the Western Surgical Association to Kansas and Topeka on the occasion of its fiftieth annual meeting. This organization began as the Western Obstetrical and Gynecological Association, was sponsored largely by Topeka physicians, one of whom Milo B. Ward was elected the first president at Topeka in December, 1891.

This association has included in its membership eight presidents of the American Medical Association and many others prominent in surgery and medical education. Having a limited membership the meetings have a quality sometimes lacking in the larger gatherings. The program which is printed in another section of this issue will be attractive especially to the men specializing in surgery. We congratulate the Western Surgical on its years and accomplishments and welcome it back to Topeka.

THE AMERICAN RED CROSS

The American Red Cross began its annual Roll Call on Armistice Day and will continue the drive for funds until November thirtieth. The greatest demand upon the Red Cross at this time is for medical and hospital supplies needed in England. The efforts to supply this need will have a strong appeal. It has recently been decided that a new preparation for use in blood transfusion will be added to the long list of supplies being sent abroad. The Blood Transfusion Betterment Association of New York City, working in conjunction with the American Red Cross has developed a technique for producing a blood plasma saline mixture which may be preserved for considerable time and is suitable for emergency transfusion. The blood is to be obtained from volunteer donors.

As an emergency measure there should be a wide field of application for blood plasma transfusion. It will prove to be of life saving value in dressing stations where casualties in shock can be given a transfusion without preliminary typing and matching.

We as physicians can appreciate more fully than any other group the great humanitarian activities of the Red Cross. The medical profession of America has always given generous support to the Red Cross and will continue to do so in its efforts to meet the increased demands now being made by war.

E PLURIBUS

Not long ago a highly respected newspaper commented editorially on the hypothesis that America had at last completed its long retreat from illusionment.

A number of facts seem to give support to this statement. We no longer place reliance on our ocean boundaries or the continued effective goodwill of our neighbors. We are no longer confident in the practical value of our man power, untrained and unarmed; we have come suddenly to realize that soft gold is a base metal until the modern alchemist's touch has converted it into the tough steel of defensive armaments.

This conversion of our currency has commenced. We have voted vast appropriations for naval increase. So far as anyone knows we are building planes on a constantly increasing scale of production. The American Medical Association has already started to organize the medical profession. We have almost enthusiastically supported Congress in a decision that is revolutionary and formerly undreamed of in this democracy—the passage of a conscription bill with the country officially at peace. We are almost pathetically eager that somehow our ramparts should be watched.

And yet with all this talk and activity one can sense beneath the surface a feeling of unreality; as if we truly believed it all to be an uncomfortable dream, from which we shall awaken to plod along again in our comfortable middle-class fashion, concerned over our customary problems, but quite sure that we shall be getting up from the same bed in the same house for some time to come, with a hot breakfast ready on the table.

Despite our financial panics and our economic depressions, our worries over the price of veal chops and our personal, medical agitations concerning colored crosses and governmental interference with

the practice of medicine, we have got along fairly well, and we do not want the affairs of the world to disturb us. We have reached that danger point in the history of a nation where an increasing gold reserve is balanced by a declining birth rate; where the accumulation of wealth may soon go hand in hand with the decay of man.

A common danger to which we shall eventually become fully awake, a retreat from illusionment which may soon be completed, a common cause in which our country will again become united may yet prove to be our moral, political and economic salvation. But regardless of what may happen on the face of the earth in the next few years, of one thing we can be certain. The world is going to be a tougher place in which to live than it has been for generations, and free men must be as tough to hold their places in it as they once were to win them.

Men now living will not again walk down the primrose path of the last few decades, and in this fact, too, may come salvation.—New England Journal of Medicine, October, 1940.

AMERICAN MEDICAL WOMEN'S ASSOCIATION

As is described elsewhere in this issue, the officials and the governing board of the American Women's Medical Association will meet in this state on December 7 and 8.

The organization is composed of a majority of the women doctors of medicine in the United States. Since its founding in 1915 it has been active in many fields of endeavor. During the last war it staffed numerous hospitals and medical units in France, England and other countries. Following that war it has continued to operate refugee and rehabilitation centers in various places in Europe and China. In this country in recent years it has sponsored maternal and public health centers in several of the Southern states, has sponsored and assisted the functions of the Medical Women's College in Philadelphia, has maintained a scholarship fund through which approximately fifty women per year are aided in obtaining a medical education and has participated in many other medical and public health activities. It numbers among its members the most prominent

women physicians in the world. Its membership requirements include membership in a county medical society, a state medical society and the American Medical Association.

The Kansas profession is very glad that the organization could meet in the state and it extends those in attendance a cordial greeting and welcome.

CANCER CONTROL

PRIMARY CARCINOMA OF LIVER AND CARCINOMA OF GALL BLADDER

Karl E. Voldeng, M.D.

Wellington, Kansas

PRIMARY CARCINOMA OF LIVER

Secondary metastatic carcinoma is quite commonly found in the liver; however, primary carcinoma of this organ is relatively rare. Its occurrence accounts for about .5 per cent of all cancer deaths. There is considerable evidence suggesting an increasing frequency of this form of cancer.

The interesting pathological aspect of primary carcinoma of the liver is its relation to regenerative processes in the liver tissue. Clinical and experimental studies have repeatedly demonstrated the remarkable regenerative power of the liver cells. Such proliferative activity is seen following any liver damage, and particularly during the healing or recovery attendant with a cirrhosis. When such widespread liver damage occurs, islands of liver tissue will regenerate forming true adenomatous nodules through the entire organ. This activity frequently can be traced directly into a liver cell carcinoma, and such tissue mutation may be noted in several areas of the same organ.

There are numerous means of classification, but in this brief discussion I shall mention only one simple means of grouping primary epithelial liver tumors. This is used by Ewing and has become quite popular:

- (1) Arising from liver cells—Hepatoma
- (2) Arising from intra-hepatic bile ducts—Cholangioma
- (3) A mixed type—Combination of first two

Symptoms produced by liver carcinoma occur relatively late in the illness and show a constant ten-

dency to increase in severity. When the diagnosis is made, there are but a few months of life remaining.

Enlargement of the liver, associated with general debility, cachexia, anemia, and digestive disturbances are the paramount symptoms. Pain, especially in the region of the large right lobe, may be prominent. Jaundice, intermittent fever, edema of legs, and ascites are later findings.

Diagnosis of primary carcinoma of the liver may be difficult and somewhat uncertain until autopsy. Liver function studies are often valuable diagnostic aids although may be misleading. Exploratory surgery may be advisable to establish definitely the diagnosis.

Treatment for cancer in this location offers very little hope at the present time. A combination of good luck and much dexterity may allow the surgeon to remove an isolated small nodule, but experience has shown that local spread occurs early even in these accidentally found early lesions.

X-ray therapy has not been valuable in these deep seated malignancies. Such therapy in fact often is very upsetting to the patient and may add insult to a hopeless cause.

Palliative treatment is necessary to relieve the patient of distressing symptoms during the fatal course of this condition.

CARCINOMA OF THE GALL BLADDER AND EXTRA-HEPATIC DUCTS

These malignant lesions form from five to seven per cent of all cancer deaths. In all surgery performed for disease of the gall bladder and bile ducts, 1.4 per cent of the cases prove to be malignant. The lesion is twice as common in the gall bladder as in the ducts, and is much more frequently seen in women than in men.

The interesting and practical clinico-pathological feature is the frequent occurrence of gall stones with these lesions. The chronic trauma produced by stones and infection seems definitely to be a cause of carcinoma in the gall bladder. This fact has been sufficient to cause a few schools to adopt a program for quite wholesale irradiation of gall stones. A more conservative and general feeling calls for a policy of eliminating only those gall bladders which have had previous insults of chronic infection plus the presence of gall stones. To allow unnecessarily such a gall bladder with stones to exist is to invite the production of cancer.

Early diagnosis of a gall bladder malignancy is difficult because of the vague symptoms produced. When the gall bladder can be palpated, the lesion as a rule is too late for operability. Operability for the most part is seen only in those lesions which are found rather accidentally by the surgeon who is

removing a gall bladder because of obvious infection and stones.

Kirklin has done much to develop a technique for better x-ray visualization of the gall bladder. He has pointed the way toward diagnosis of early benign and malignant lesions in this structure, and the roentgenologists are becoming more and more alert in discovering early operable growths. Our present hopes for more cures in this field rest in a large part on this increasing efficiency of the x-ray laboratory.

Lesions involving the extra-hepatic bile ducts are usually located at the Ampulla of Vater; however, any part of the common or hepatic ducts may be invaded.

When a new growth involves the common duct, obstruction develops early, thus producing jaundice as the symptom of prominence. A stone may be associated with the lesion and may have been the irritating factor causing the malignancy. The clinician and surgeon must frequently resort to exploration before the true cause of common duct obstruction can be told.

Surgical removal of these lesions is the only hope of cure; however rare, such a removal can be accomplished. Surgery as a palliative measure may be a very useful means of eliminating the jaundice by anastomosing the gall bladder to the stomach or duodenum, thus diverting the bile around the obstruction. Such individuals may have several years of active useful life when once the obstruction is relieved.

MEDICAL ECONOMICS

SUMMARY OF STUDY OF INDIGENT MEDICAL CARE IN RILEY COUNTY*

*Abstract of a report made by Mr. Ralph Callahan, Welfare Director of Riley County.

On June 1, 1939, the Riley County Board of Social Welfare entered into a contract with the Riley County Medical Society for all medical and surgical care of the indigent of Riley County. In this contract the physicians set up a unit schedule for their services on a basis of approximately fifty per cent of their normal charges for all professional services. In other words, when the unit was of par value which was set at one dollar they would receive approximately fifty per cent of the normal charges for that particular item of professional service rendered. After seven months test, they found the unit value to range from fifty-nine cents to seventy cents. Where-

upon the medical society gave notice to the county board of their feeling that a better plan could be evolved. After further study and consideration, they offered to reenter into a new contract with some changes. The major change called for an increase from two to three dollars a month on all general assistance cases only. Before an answer could be given it was felt necessary that more extensive study and analysis should be made of the workings of the contract for a given period. This was done between June 1st and December 31st, 1939.

During a similar period of 1938, the total payment made to physicians for medical services rendered to the indigent was \$2,011.47. For the seven month period stated in 1939 the amount paid was \$4,593.47. In addition to this \$353.62 was paid to the county health officer, making a grand total of \$4,974.09. This showed a net increase over a similar period in 1938 of more than 100 per cent. During the seven months period of 1939 there was a monthly average of 359 cases eligible for treatment under the medical plan. For the same period in 1938, the monthly average was 309 cases. It was found that in 1939 the total number of cases eligible for treatment during this period was 387 of which 281 received some form of medical service and 103 cases received no medical service. It also developed that of the 281 cases treated, fifty-eight cases used fifty-two per cent of the total amount paid to the medical society. In this connection it should be stated that an arrangement had been made whereby any family not on the regular approved list would be eligible for treatment under the medical plan by the payment of \$2.00 monthly. Many of these marginal cases paid that fee but needed no medical treatment during this seven months period.

With these facts in mind and with the past experience as a guide, the following recommendations were made: That an Executive Committee of Physicians be appointed by the Riley County Medical Society whose duty it would be to supervise and pass upon the distribution of the funds among the various members of the society. This committee would be composed of three members serving six months each, which would require a new member on the Board every two months. The reason for this is that it was discovered in the study of the cards that there was a great deal of difference in the unit charge made by various doctors for the same class of service and it was believed that a committee of the society could assist in standardizing the charges made. It was recommended that no chronic cases be operated on or given continued medical treatment until such cases had been presented by the attending physician to the Executive Medical Committee and approved by them for such work. The medical society also

recommended a change in the arrangement for the care of marginal cases upon the payment by them of a \$2.00 monthly fee. It was suggested that such cases should be paid for at the unit value rate which would be over and above the regular \$2.00 per capita paid for each such assistance client. It was agreed that such cases would not be accepted until they were approved by the Medical Executive Committee, the county director and the county board. It was also suggested that an arrangement be made by the medical society with some bank or other institution to receive the funds paid in by the individual members and the county. These funds in the past have been paid in at one of the doctor's offices. This resulted in quite a natural situation. Clients would go into the office, pay their fee, and while there would decide that they needed a brief examination or some medical attention, which resulted in the unnecessary expenditure of a large number of units. It was also agreed that the director be authorized by the medical society to request and secure a consultation for any client by a Board of Doctors appointed by the president of the medical society, and that after such consultation and diagnosis, the patient would be required to choose a physician and the physician follow the recommendation of the consultation committee. It was felt that this would stop patients running from one doctor to another receiving different diagnoses and different prescriptions. It was also recommended that no doctor be permitted to dispense his own drugs and that all drugs and that all prescriptions must be filled at local drug stores. Also that the Medical Executive Committee be required to pass upon all major surgical cases of every nature before payment would be allowed the individual physician. On emergency cases the operation may be performed and then an immediate report made by the physician to the committee and their approval obtained. All of these recommendations were submitted to the medical society and were accepted and approved by them and by the county board. All parties to this agreement are confident that if the Medical Executive Committee enforces the rules in the contract that the patients will receive adequate medical services and that the physicians will receive in payment amounts equal to or more than they had originally expected.

Members of the county society and of the welfare board and the indigent of Riley County are all convinced that prior to May 1939 medical service for the indigent in Riley County were not as satisfactorily provided as they are now. There was an average of twenty-two patients per month treated in 1938 as compared with an average of 126 per month in 1939. There is no restriction of the amount or kind of medical attention a client was

entitled to receive if it was necessary. Each patient had the privilege of selecting his own doctor, and upon recommendation of this doctor, teeth were extracted, glasses fitted, and medical appliances were furnished. Home visitors, city school nurse, and county nurse were requested to refer any client or any client's child to their family doctor who appeared to be in need of medical attention. Thus the responsibility of securing adequate medical and surgical care for those in need is not left to be strictly the responsibility of the ill person but such patients are sought out by the above mentioned agencies and recommended to their physician for care. It is interesting to note that the average cost per month per patient treated was \$12.00 in 1938 as compared with \$2.58 in 1939. While at the same time the cost of this program was increased approximately 100 per cent in 1939 over 1938, and we have a wholly adequate medical service as contrasted with an inferior plan previously. There are a number of cases that we have been able to reclassify from unemployable to employable persons due to the improvement in health or cases where a member of the family would be released from the home for employment due to improvement of the health of some other member of the family. Such values can not be measured in dollars and cents. It is felt that the number of cases requesting treatment will decline from now on. The doctors in Riley County are much pleased with the working of the plan. The county board is much better pleased with the present arrangement than the old one and feel that the work is being well done. The many marginal cases that were not entitled to county care but were probably unable to pay regular fees for medical care that was needed cooperated fairly well. It was found that between five and eight per cent of such cases did not make their payments as agreed. However, this leaves a large majority who cooperated very nicely. The clients or the indigent poor are heartily and enthusiastically in favor of the plan and feel that they are getting excellent service. There is no doubt but that the success or failure of this plan or any good medical plan rests almost entirely with the medical society. Some restrictions are necessary but the cooperation has been excellent in Riley County and it is necessary if the plan is going to be made a success.

TUBERCULOSIS CONTROL

EPIDEMIOLOGICAL TRENDS OF TUBERCULOSIS

Max Pinner, M.D.

The epidemic, tuberculosis, is "young" when it makes its first encounter with a population; it "matures" when its contact has become fairly universal for a few generations and it is "old" when the population as a whole has become sufficiently resistant to its ravages that the death rate falls rapidly. Earliest childhood, maturity and senescence of tuberculosis are represented by the early invasion by tuberculosis of certain African tribes and a group of American Indians, the American Negro and our own white population.

Wherever tuberculosis strikes first, it is in primitive societies. By "primitive" is meant a society previously not or hardly in contact with the occidental civilization and a society that for a long period has lived in essentially unchanged, settled conditions—a population without history in the common sense of the word. Tuberculosis never comes alone to an untouched population; it always comes accompanied by, and rather through, agents of occidental civilization. It is, therefore, always associated with profound changes and disturbances of tribal life. These changes play a most significant role in shaping the epidemic features.

Borrel reports that a portion of Senegalese troops were tested with tuberculin upon arrival in France during the last war, and only four per cent to five per cent reacted. Many of these men were observed at a later date as tuberculous patients and on the autopsy table. The general picture was about as follows: Following a certain period without evident clinical symptoms, during which swellings of supraclavicular and tracheobronchial lymph nodes can be observed, the disease develops rapidly with toxemia, high fever, weakness and multiple organ involvement, which in seventy per cent leads to death. At autopsy, diffuse caseation of multiple groups of lymph nodes is dominant in seventy per cent to ninety per cent of the cases. One-fourth of the patients died of generalized miliary tuberculosis and, in a large proportion of the remainder, diffuse caseous foci were present. Here is a form of disease characterized clinically by the predominance of systemic over local symptoms, by the rapidity of its course and its high fatality. The characteristics are generalization, diffuse caseation and the absence of reparative pro-

"The incidence of all types of reactions was no greater from the transfusion of preserved blood than when fresh blood was employed, provided proper care was taken in storing and handling it," Elmer L. DeGowin, M.D., and Robert C. Hardin, M.D., Iowa City, report in *The Journal of the American Medical Association* for September 14. Their findings are based on a study of the results of 295 fresh blood and 2,128 stored blood transfusions.

cesses.

However, the majority of Senegalese neither acquired nor died of tuberculous disease and it is safe to assume that many health reactors returned to Africa, proving their resistance to tuberculous infection.

A somewhat later stage, that of practically universal infection, is represented by an epidemic among certain Indian tribes of the Canadian plains. Following a period (1850-1880) in which there were only sporadic cases of tuberculosis, the epidemic reached its height between 1884 and 1890, during which time one out of three Indians had visible lymph node swelling and by 1906 about twenty per cent of the school children in Qu'Appelle were operated upon for tuberculous nodes. The death rate rose from 1,000 in 1881 to 9,000 in 1886, falling to 2,000 in 1901, to 1,000 in 1907, and following the establishment of anti-tuberculosis work in 1930, it reached 270 in 1931-32.

The most complete epidemiological studies of tuberculosis in a relatively primitive society were made on the South African tribes that provide the laborers for the mining industry in South Africa. These studies are reviewed by the author. He points out that the epidemiological picture of South African natives is not a uniform one as these natives have been observed under three different living conditions, namely, in their native villages, during labor service in mines and during war service in France. Hence, observations limited to only one of the three localities would lead to an incomplete and biased impression.

A more mature stage of the epidemic is illustrated by tuberculosis as it occurs in the American Negro. The tuberculin index is higher than in the white American, the death rate about three times as high and the peak of the age incidence is at an earlier age. Furthermore, the shift of this peak toward older age groups, while pronounced in the white, is negligible in the Negro.

Many Negroes show the same chronic localizing type of disease as the whites, but relatively acute forms, generalizations in the form of lymphatic and hematogenous spread occur with much greater frequency in Negroes than in whites. This was demonstrated by the author in a previous study and in order to confirm these findings, he calculated the ratio of deaths from all forms of tuberculosis to deaths from disseminated tuberculosis, separately for the two races. The figures derived from the United States mortality statistics show that the relative frequency of disseminated forms is considerably higher in Negroes and that the decrease of disseminated forms during the last seventeen years is much smaller in Negroes than in whites.

Several studies of tuberculosis among Negroes

and whites under identical or similar living conditions, show that while the morbidity rates are closely similar, the mortality rate for the Negro is about four times higher than for the white. One writer concluded that the chances for colored children (in Baltimore) to become infected in a tuberculous family are about equal to those of white children under similar circumstances, but the chances of dying from tuberculosis are three times greater in Negro than in white children.

Lack of space prohibits quotation of the author's discussion based on his observations but the following points stand out:

In the early phases of tuberculosis the disease is acute, rapidly fatal, generalized, without tendency to heal, with toxemic symptoms overshadowing local symptoms and has a predilection for the young.

No nation or tribe free of tuberculosis has a uniformly high susceptibility to tuberculosis. The complete lack of resistance in so-called virgin soil is a myth. The individual degree of resistance and the collective frequency of the disease are not simply matters of interplay between host and bacillus but they are profoundly influenced by living conditions in the widest sense of the word.

The most spectacular decrease in tuberculosis mortality occurred, as a rule, before any organized campaign against tuberculosis could be initiated. However, anti-tuberculosis work is undoubtedly effective in later phases of the epidemic.

The South African report makes it clear that previous infection did, in no noticeable way, modify or alter tuberculous disease that developed later. A primary infection in a not highly resistant stock produces allergy without causing immunity.

There is no shred of evidence to show that immunization is transmitted by heredity. The elimination of the least resistant strains must undoubtedly play an important role in the gradual attenuation of tuberculosis, particularly so in the early phases of the epidemic.

Tuberculosis mortality parallels the socio-economic conditions, so much so that it would seem that poverty and unusual stress and strain should be the guide posts for case-finding programs.

The danger that an acute and virulent epidemic may sweep again through our population sometime after tuberculosis has been eliminated (or reduced to its minimum) because the immunizing effects of infection would then be lost, would appear slight. A population that has survived a tuberculosis epidemic and has rid itself of it is hardly comparable to a "virgin-soil" population.

From: *Tuberculosis Abstracts*, November, 1940. *Epidemiological Trends of Tuberculosis* by Max Pinner, M.D., *American Review of Tuberculosis*, Vol. XLII, Sept., 1940.

When
Mothers' Milk
 is not
 available . . .



USE LACTOGEN



It is universally recognized that the milk from the cow is a very satisfactory and successful substitute for mothers' milk if offered in proper form and proportion. That is why Lactogen is made wholly from fresh cows' milk. Taken from tuberculin-tested herds, the milk used in making Lactogen is completely checked for cleanliness and freshness before acceptance . . . then processed in shining, spotless, stainless steel drying chambers under ideal modern conditions of control and sanitation. Lactogen is fresh, whole cows' milk, fortified with additional milk fat and milk sugar to match human milk proportions of fat, protein, and carbohydrates.

Lactogen is an easily digestible food. The characteristics of the casein are changed to form fine and flaky curds, and the fat globules are physically broken down.

Lactogen is especially convenient and safe. It may be used even where there is no refrigeration. Its preparation is simple, even for the most inexperienced mother.

No advertising or feeding directions, except to physicians. For free samples and literature, send your professional blank to "Lactogen Department."

NESTLÉ'S MILK PRODUCTS, INC.

155 EAST 44TH ST., NEW YORK, N. Y.

NEWS NOTES

ELECTION

Dr. J. B. Carter of Wilson was re-elected as Senator from the Thirty-second District, which comprises the counties of Ellsworth, Lincoln, Osborne and Russell.

D. B. Fordyce, an osteopath of Oswego, was re-elected to the House of Representatives and K. A. Bush, an osteopath of Harper, was also elected to that body. J. B. Donley, an osteopath of Kingman, was defeated. J. F. Romary and C. B. Pettit, chiropractors of Burlington and Lyons respectively were defeated as candidates for the House of Representatives.

COMMITTEE

The Advisory Committee on Pneumonia Control met in Topeka on October 17. In accordance with the request made by the Kansas State Board of Health recommendations were prepared for the 1941 pneumonia control program of that organization.

The plans for this years program will include the provision of pneumonia serum and sulfapyridine without cost to indigent persons as was done last year. Likewise speakers on pneumonia control will be made available to the county medical societies.

MEDICAL PREPAREDNESS

The following bulletin was forwarded to each county society on October 14:

TO: ALL PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES

As you probably know, the War Department and the other official military agencies of the country have asked that the medical profession actively assist in the preparation and operation of medical plans under the National Defense Program. The American Medical Association has established a Committee on Medical Preparedness and each state society has appointed a similar committee to assist in this regard. Likewise, each county medical society in the country is now being asked to appoint a medical preparedness committee for similar purposes.

Although all plans are not as yet complete, it is believed that the county medical society committees will exercise particularly important functions in the military preparedness program. They will probably be asked to aid in the classification of their members, to assist in making selections in the event the services of practicing physicians are required for active duty, to help in the supervision and provision of examinations for conscriptees, and in many other ways. In fact, if present indications are followed it is probable that the county medical society committees will have almost complete charge of the medical preparedness program in their counties.

Hence, if you would be good enough to do so we would greatly appreciate your appointing a committee of this kind as soon as possible. The committee may consist of three, five, seven, or as many members as your society desires. It is probably true, however, that physicians under thirty-five years of age and those who belong to the National Guard or the various reserve corps should not be appointed inasmuch as some of these may be called to duty.

F. L. Loveland, M.D., Chairman
Kansas Committee on Medical Preparedness.

The appointments for the medical preparedness committees have been received from most of the county medical societies.

Kansas will have seventeen medical advisory boards which will handle any appeals desired from the decisions of county selective service boards on questions of physical findings of selective service registrants. Upon request of the Adjutant General of the State of Kansas, the medical preparedness committees of the county medical societies of the places where the boards will be located have prepared recommendations concerning the personnel of these boards. The following recommendations have been made by these committees for that purpose:

DISTRICT ONE AT ATCHISON

William K. Fast, M.D., Hugh L. Charles, M.D., F. I. Stuart, M.D., M. T. Dingess, M.D., Arthur Whitaker, M.D., W. L. Anderson, M.D., F. K. Bosse, M.D.

DISTRICT THREE AT LAWRENCE

R. A. Schwegler, Jr., M.D., M. T. Sudler, M.D., H. P. Jones, M.D., N. P. Sherwood, M.D., H. T. Jones, M.D., T. L. Foster, M.D., L. S. Powell, M.D.

DISTRICT FOUR AT FORT SCOTT

T. L. Foster, M.D., William S. Gooch, M.D., L. L. Cooper, M.D., R. J. Dittrich, M.D., John R. Newman, M.D., J. R. Prichard, M.D., John D. Hunter, M.D.

DISTRICT FIVE AT PITTSBURG

H. J. Veatch, M.D., Carl S. Newman, M.D., W. V. Hartman, M.D., H. L. Church, M.D., Clarence H. Benage, M.D., Earl C. Lightfoot, M.D., C. M. Gibson, M.D.

DISTRICT SIX AT PARSONS

L. A. Proctor, M.D., T. D. Blasdel, M.D., J. T. Naramore, M.D., Charles H. Miller, M.D., John D. Pace, M.D., Gilbert W. Hay, M.D., A. C. Baird, M.D.

DISTRICT SEVEN AT TOPEKA

Don C. Wakeman, M.D., Orville R. Clark, M.D., Clyde B. Trees, M.D., John L. Lattimore, M.D., Arthur K. Owen, M.D., William C. Menninger, M.D., Frank C. Boggs, M.D.

DISTRICT EIGHT AT MANHATTAN

Ralph G. Ball, M.D., Barrett A. Nelson, M.D., K. F. Bascom, M.D., J. D. Colt, Sr., M.D., W. M. Reitzel, M.D., W. H. Clarkson, M.D., L. G. Balding, M.D.

DISTRICT NINE AT EMFORIA

F. A. Eckdall, M.D., O. J. Corbett, M.D., J. J. Hovorka, M.D., C. H. Munger, M.D., Clyde Wilson, M.D., M. L. Perry, M.D., C. S. Trimble, M.D.

DISTRICT ELEVEN AT WICHITA

T. T. Holt, M.D., E. S. Edgerton, M.D., A. E. Bence, M.D., C. A. Hellwig, M.D., E. J. Frost, M.D., L. Gilbert Little, M.D., E. E. Tippin, M.D.

DISTRICT TWELVE AT SALINA

K. L. Druet, M.D., Leo J. Schaefer, M.D., George E. Seitz, M.D., Earl L. Vermillion, M.D., C. M. Fitzpatrick, M.D., L. W. Hatton, M.D., R. E. Cheney, M.D.

DISTRICT THIRTEEN AT ELLSWORTH

George F. Zerzan, M.D., Alfred O'Donnell, M.D., J. B. Carter, M.D., Henry S. Dreher, M.D., H. St. C. O'Donnell, Bruce A. Higgins, M.D., George F. Davis, M.D.

DISTRICT FOURTEEN AT HUTCHINSON

G. A. Chickering, M.D., Clarence W. Hall, M.D., J. E. Foltz, M.D., Richard A. Stewart, M.D., Harold R. Barnes, M.D., John A. Dillon, M.D., William M. Scales, M.D.



Camp Departments are located in good stores from coast to coast. Here, Camp trained fitters accurately fill your prescriptions for Camp Scientific Supports from large assortments of available stock.

THE SUPPORT BEHIND YOUR PRESCRIPTIONS

In good stores, in or near your city, a Camp Department stands ready to carefully interpret your prescriptions for patients who need Scientific Support. Perhaps you have seen a typical Camp Departmental Unit on exhibition at Medical Conventions and already know how completely it is stocked and how thoroughly it is equipped to follow your instructions.

Each Camp Department is staffed by fitters trained in one of the comprehensive S. H. Camp & Company fitting courses held periodically in leading cities.

Conducted by the Camp Educational Staff, under medical supervision, these courses give corsetieres a thorough schooling which enables them to fill your orders scientifically and correctly; to properly fit garments for maternity, postoperative and other specialized needs, as well as for general wear.

When you direct your patients to a Camp Dealer, you can do so with assurance that they will be carefully fitted by experts who take pride in their own profession and its faithful service to yours.



CAMP
TRADE MARK
Supports

S. H. CAMP & COMPANY, JACKSON, MICHIGAN



Offices in New York; Chicago; Windsor, Ontario; London, England. World's largest manufacturers of Scientific Supports

DISTRICT FIFTEEN AT DODGE CITY

X. F. Alexander, M.D., G. O. Speirs, M.D., N. E. Melencamp, M.D., V. B. Dowler, M.D., C. E. McCarty, M.D., John A. Dillon, M.D., J. G. Janney, M.D.

DISTRICT SIXTEEN AT GARDEN CITY

Sanford Bailey, M.D., O. W. Miner, M.D., Frank E. Coffey, M.D., R. F. Kippenberger, M.D., Claude E. McCarty, M.D., John A. Dillon, M.D., James G. Janney, M.D.

DISTRICT SEVENTEEN AT HAYS

A. M. S. McDermott, M.D., Harry R. Bryan, M.D., Lloyd W. Reynolds, M.D., Frank E. Coffey, M.D., Murray C. Eddy, M.D., Clyde D. Blake, M.D., O. A. Hennerich, M.D.

Appointment has been announced of four physicians who will serve on the district appeal boards. These are as follows: Dr. J. F. Gsell for the Wichita board, Dr. D. A. Kendall for the Great Bend board, Dr. Philip W. Morgan for the Emporia board and Dr. R. B. Stewart for the Topeka board. The appeal boards will each consist of several laymen and one physician and will review general deferment questions referred by the county selective service boards.

Kansas will also have United States Army induction boards located at Leavenworth and Wichita. The induction boards will make the final physical examinations of registrants who are chosen for active duty. To a considerable degree these boards will be staffed by medical officers of the army but where Army facilities are not complete the assistance of civilian physicians will be utilized. Upon request of the Army, the Sedgwick County Medical Society has formulated a rotating staff plan for assistance to the Wichita board. The Army has not as yet completed its plans for the Leavenworth board.

Physicians appointed to assist the 126 Kansas county selective service boards recently received their appointments from the President of the United States. These physicians will supervise the physical examinations of registrants made by the county boards. Arrangements are being made by the Adjutant General to furnish medical consultants with the assistance of county medical societies or individual physicians wherever such is necessary or desired.

Approximately seventy per cent of the Kansas physicians have completed and returned the American Medical Association questionnaire on Medical Preparedness. The Society has forwarded an additional notice and copies of the questionnaire to each physician who has not as yet responded. Those who have not as yet completed their questionnaire are requested to do so immediately.

WESTERN SURGICAL ASSOCIATION

The Western Surgical Association will hold its 50th anniversary meeting in Topeka on December 6 and 7. The scientific sessions will be held at the Topeka Municipal Auditorium and the other events of the meeting will be held at the Hotel Jayhawk.

The program for the meeting is as follows:

FRIDAY, DECEMBER 6—MORNING SESSION—9:00 A.M.

"Cystic Disease of the Breast—A Critical Review." Herbert H. Davis, M.D., Omaha, Nebraska.

"Joint Debridement: Surgical Treatment of Certain Types of Arthritis." Paul B. Magnuson, M.D., Chicago, Illinois.

"Treatment of the Cotton's Type of Fracture of the Ankle." Ralph G. Carothers, M.D., Cincinnati, Ohio.

"The Conservative Treatment of Fractures of the Shaft of the Femur." William R. Cubbins, M.D., Chicago, Illinois.

"Resection of the Head of the Pancreas and Duodenum for Carcinoma." Thomas G. Orr, M.D., Kansas City, Missouri.

"Pancreatic Fistula: Clinical and Experimental Observations." John M. McCaughan, M.D., St. Louis, Missouri.

FRIDAY, DECEMBER 6—AFTERNOON SESSION—2:00 P.M.

"The Historical Aspects of Surgical Infections." Frank L. Meleney, M.D., Guest Speaker, New York, New York.

"Carcinoma of the Stomach." Waltman Walters, M.D., Rochester, Minnesota.

"Two Hundred and Thirty Patients Subjected to Gastric Resection by Fifty Surgeons." E. Eric Larson, M.D., Los Angeles, California.

"Obstruction of Stomach Due to a Congenital Mucosal Cyst." Arthur R. Metz, M.D., Chicago, Illinois.

"The Chemosurgical Treatment of Cancer, a Microscopically Controlled Method." Edwin R. Schmidt, M.D., Madison, Wisconsin; F. E. Mohs, M.D. (By Invitation).

"Advanced Cancer of the Nose and the Accessory Sinuses; Treatment by Actual Cautery." James F. Percy, M.D., Los Angeles, California.

SATURDAY, DECEMBER 7, MORNING SESSION

"Three Thousand Appendectomies." Carl E. Black, M.D., Jacksonville, Illinois.

"Strangulated Femoral Hernia Sac without Abdominal Contents." Raymond W. McNealy, M.D., Chicago, Illinois. Manuel E. Lichtenstein, M.D. (By Invitation).

"Diagnosis and Treatment of Substernal Types of Diaphragmatic Hernias." Stuart W. Harrington, M.D., Rochester, Minnesota.

"Surgical Consideration in Constrictive Pericarditis." Warren H. Cole, M.D., Chicago, Illinois. R. D. Weber, M.D. (By Invitation).

"The Surgical Problem of Unilateral Exophthalmos." Loyal Davis, M.D., Chicago, Illinois. John Martin, M.D. (By Invitation).

"The Late Functional Results Obtained by the Free Skin Grafting of Burns." James Barrett Brown, M.D., St. Louis, Missouri. Frank McDowell, M.D. (By Invitation).

EXECUTIVE SESSION

SATURDAY, DECEMBER 7—AFTERNOON SESSION

"Hemangioma of the Large Bowel." Verne C. Hunt, M.D., Los Angeles, California.

"Recurring Jejunal Intussusception." Everett P. Coleman, M.D., Canton, Illinois.

"The Treatment of Intussusception." Jay Ireland, M.D., Chicago, Illinois.

"Experimental Studies on the Motor Mechanism of the Intestine." Frank C. Mann, M.D., Rochester, Minnesota.

"Surgical Treatment of Ulcerative Colitis." Maurice Kahn, M.D., Los Angeles, California.

"Transplantation of Fascia Lata in Cystopexy." William J. Carson, M.D., Milwaukee, Wisconsin.

A preliminary program consisting of the following presentations will also be held at the Hotel Jayhawk on December 5 commencing at 8:00 p.m.

"The Immunology of Osteomyelitis." James B. Weaver, M.D., Kansas City, Missouri.

"Tumors of the Splanchnic Nerves." H. R. Wahl, M.D., Kansas City, Missouri.

"A Study of the Cholesterol Partition." Morris H. Harless, M.D., Kansas City.

The Effectiveness of AMNIOTIN



IN RELIEVING MENOPAUSAL
SYMPTOMS IS AN
ESTABLISHED FACT

ELEVEN years ago Sevringhaus and Evans¹ reported that Amniotin was "of marked value in the relief of the vasomotor phenomena of the menopause." This observation has been confirmed by so many published clinical papers that the effectiveness of Amniotin in relieving distressing menopausal symptoms is widely recognized.

For example, Novak² in a paper on the management of the menopause states: "The fact remains, however, that a certain proportion of women suffer with severe vasomotor symptoms for a variable and unpredictable time, and that the lot of these women can be made much easier by intelligent organotherapy. Whereas formerly there was much difference of opinion among clinicians as to the efficacy of hormone treatment, opinion is now unanimous that it is of genuine value. In fact, organotherapy for menopausal symptoms is looked upon as one of the more satisfactory applications of

endocrine knowledge in the field of gynecological practice."

Early, Adequate Treatment Suggested

Schneider³ citing experience in 519 cases writes: "...the ease with which complete relief can be obtained in the early cases, has been one of the most striking observations. . . ." The milder forms of disturbance often can be controlled by the oral administration of Amniotin in capsules. Larger doses may be administered advantageously by the hypodermic route.

Amniotin is a highly purified preparation of naturally occurring estrogenic substances. It is available in Capsules containing 1000, 2000 and 4000 I. U., Pessaries of 1000 and 2000 I. U., and in 1-cc. ampuls containing 2000, 5000, 10,000 and 20,000 I. U.

¹ Sevringhaus, E. L., and Evans, J. S.: *Am. J. M. Sc.* 178:638, Nov. 1929.

² Novak, Emil: *Surg. Gynec. & Obst.* 70:124, Jan. 1940.

³ Schneider, P. F.: *Am. J. Obst. & Gyn.* 37:861, May 1939.

For literature address the Professional Service Department
E. R. Squibb & Sons, 745 Fifth Avenue, New York, N. Y.

Amniotin

A SQUIBB PREPARATION OF ESTROGENIC SUBSTANCES
OBTAINED FROM THE URINE OF PREGNANT MARES

"Amyloid Goiter." George Walker, M.D., Kansas City.
 "Solid Tumors of the Urachus." Orville R. Clark, M.D., Topeka.

"Liver Function and Biliary Tract Surgery." V. E. Chesky, M.D., Halstead.

Dr. W. M. Mills, of Topeka, Chairman of the Committee on Arrangements has invited the members of the Society to attend any of the scientific session that they may care to attend.

HEART COURSE

Approximately thirty Kansas physicians attended the post-graduate course on heart disease held in Emporia on October 21-25 and sponsored by the Kansas Heart Association and the Society Committee on Heart Disease.

The speaker for the course was Dr. Frank N. Wilson, Professor of Internal Medicine, University of Michigan, School of Medicine, Ann Arbor, Michigan.

VISITORS

Dr. R. A. Vonderlehr, Assistant Surgeon General, Division of Venereal Disease, of the United States Public Health Service visited the offices of the Kansas State Board of Health in Topeka on October 24.

A group of members of the Kansas State Board of Health and officers of the Society entertained Dr. Vonderlehr and Dr. L. E. Burney, Kansas City, Missouri, Regional Consultant of this District for the United States Public Health Service, at a luncheon.

WOMEN'S MEDICAL ASSOCIATION

The Kansas members of the American Medical Women's Association have announced that a meeting of the Board of Trustees of that organization will be held in this state on December 7 and 8. A part of the meeting will be held at Halstead and the remaining portions at Moundridge and Wichita. The detailed program for the meeting is as follows:

DECEMBER 7

- 8:00 a.m. to 12:00 Medical, surgical and neurological rounds of the Halstead Hospital.
- 12:00 p.m. Luncheon—Halstead Hospital.
- 2:00 p.m. Board Meeting—Dr. Elizabeth Mason Hohl of Los Angeles, California, presiding.
- 2:00 p.m. Get acquainted meeting in the Halstead Hospital Library for visiting physicians—Dr. Florence Sherbon of Lawrence presiding.
- 7:00 p.m. Dinner at "Doxurua" Hertzler home, in honor of Board members. Dr. Cora Dyck, Moundridge, presiding.

DECEMBER 8

- 8:00 a.m. Breakfast at Moundridge with Dr. Cora Dyck.
- 11:00 a.m. Wichita. Visit to the St. Francis Hospital. Program arranged by Dr. Frances Schiltz, Wichita.
- 1:00 p.m. Luncheon at Wichita Airport followed by motor trip through Wichita.
- 4:00 p.m. Tea at home of Dr. Frances Schiltz, Wichita.

The American Medical Women's Association is a national organization composed of women physicians. Membership in the organization requires membership in a county and state medical society and in the American Medical Association.

All Kansas physicians who desire to attend the above meeting are invited to do so.

TECHNICIAN'S SEMINAR

The second annual technicians seminar will be held in Topeka on December 10, 11, and 12, at the Hotel Jayhawk. Any technician in the state of Kansas, associated with a physician or hospital, is invited to attend. The first two days will be given over to clinical laboratory procedures. The third day will be devoted entirely to serology. Registrations should be made to Dr. J. L. Lattimore, Topeka, Kansas.

CANCER PAMPHLETS

Recently a new cancer pamphlet has been published by the Kansas State Board of Health in conjunction with the Society Committee on Control of Cancer, for distribution by the Women's Field Army and other lay organizations interested in the prevention of cancer.

The leaflet is entitled "Early Cancer Can Often Be Cured by X-Ray, Radium and Surgery." The two subjects taken up are cancer of the uterus and cancer of the breast. The first copies were mailed out by the Board of Health on November 7.

MEETING

The following scientific program was presented at the Sectional meeting of the American College of Physicians held in Topeka on November 7-8.

BIOCHEMICAL AND PHYSIOLOGICAL PROGRAM November 7

- Enzymes.....Dr. Thos. T. Holt, Wichita
- Amino Acid.....Dr. Allan Olsen, Wichita
- Peripheral Circulation and Blood.....Dr. Earl Mills, Wichita
- Choline.....Dr. Frances Schiltz, Wichita
- Physiology of the Vegetative Nervous System.....Dr. O. O. Stoland, Lawrence
- Physiology of the Kidney.....Dr. Woodward, Lawrence
- Colloids.....Dr. C. W. Erickson, Pittsburg

CLINICAL PROGRAM November 8

- Obesity.....Dr. Don C. Wakeman, Topeka
- Some Recent Developments in Our Knowledge of Natural Immunity.....Dr. N. P. Sherwood, Louis Coriell and Winston Miller, Lawrence
- Clinical Application of Vitamine.....Dr. Harold H. Jones, Winfield
- Cardiac Manifestations of Vitamine B Deficiency.....Dr. A. J. Revell, Pittsburg
- Dynamic Analysis of Case Material.....Dr. Karl A. Menninger, Topeka
- Tophaceous and Pretophaceous Gout.....Dr. Geo. F. Corrigan, Wichita
- Case Report of Disseminated Tuberculosis with Seven Years Fever of Undetermined Origin.....Dr. Fred Angle and Dr. Wm. Algie, Kansas City
- Pulmonary Embolism.....Drs. Fred J. McEwen and Dr. J. B. Fisher, Wichita
- Initial Complaint in Chronic Degenerative Disease.....Dr. John Porter, Concordia
- Hypercholesterolemia, Case Report.....Dr. F. C. Taggart, Topeka

CHRISTMAS SEALS

*Help to Protect Your
Home from Tuberculosis*

Cook County Graduate School of Medicine

(In affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue, starting every two weeks. General Courses One, Two, Three and Six Months; Clinical Courses; Special Courses. Rectal Surgery every week.

MEDICINE—One Month Course in Electrocardiography and Heart Disease every month, except August and December.

FRACTURES AND TRAUMATIC SURGERY—Informal Course every week. Special Courses may be arranged.

GYNECOLOGY—Clinical Diagnostic and Didactic Course every week.

OBSTETRICS—Informal Course every week.

OTOLARYNGOLOGY—Informal and Personal Courses every week.

OPHTHALMOLOGY—Informal Course every week.

ROENTGENOLOGY—Courses in X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

**GENERAL, INTENSIVE AND SPECIAL COURSES IN
ALL BRANCHES OF MEDICINE, SURGERY
AND THE SPECIALTIES**

**TEACHING FACULTY—ATTENDING STAFF OF
COOK COUNTY HOSPITAL**

Registrar, 427 South Honore Street, Chicago, Ill.



OAKWOOD SANITARIUM

The beauty and quietness of the environment of Oakwood Sanitarium cannot be over emphasized. This makes the Institution ideal not only for nervous and mental patients but for convalescents and rest cures as well. Alcoholics and drug addicts are accepted.

Illustrated Booklet and Rates on Request

**OAKWOOD SANITARIUM
Tulsa, Oklahoma, Route 6**

NED R. SMITH, M.D.
Resident Medical Director

BRITISH WAR RELIEF

The following communication has been received from the Medical and Surgical Supply Committee for British War Relief:

"The Medical and Surgical Supply Committee is not appealing for your financial assistance!

British soldiers and civilians are being killed by the thousands. Those who survive are in desperate need of immediate medical and surgical aid.

Somewhere in your office you have quantities of samples sent you by the various manufacturing and pharmaceutical houses. These samples plus any other supplies and equipment you feel able to donate will be the means of saving human life.

You of the medical profession know what speed, efficiency and equipment mean at such a time. Send us what you can; label it clearly so that the doctors and nurses who have volunteered their services to classify these things can do so with the minimum loss of time.

Time is the deciding factor in this state of emergency."

In a later communication the committee advises that it is particularly in need of the following:

Instruments and sterilizers.

Bandages and adhesive.

Drugs—local antiseptics, cardiac and circulatory stimulants, sedatives and narcotics, sulfanilamide group, vitamin concentrates, iron preparations, drugs for subcutaneous or intravenous use, anti-diarrheal drugs, analgesics, antipyretics, cathartics, food concentrates.

An attempt is being made to centralize collection points for supplies in each state.

NATIONAL PHYSICIANS COMMITTEE

The National Physicians Committee for the Extension of Medical Services recently published the following report of its activities of the past year.

"We believe that you, at this time, will be very much interested in this letter which may be considered a very brief interim report on the eleven-months operation of the N.P.C.

Your Management Committee met in Chicago on October 5 and 6. The past and immediate present operations were carefully reviewed. These have been of such a nature and, in some respects, so unique and unusually effective that we felt they should be called to your attention. The future needs and prospects were comprehensively surveyed and appraised.

Literally millions of pieces of printed matter have been distributed. Two two-page advertisements in color were printed in the Saturday Evening Post. Approximately fifty leading newspapers throughout the United States carried the N.P.C. announcements in the form of full-page newspaper advertisements. However, all of these efforts were merely means to an

end. The final result is an almost unbelievable one.

One year ago there was a menacing prospect of a dangerous degree of political control of medical practice. This was universally recognized. It was taken for granted that the medical practice issue would be a major one in the campaign that will culminate on November 5.

However, to date, neither political party and none of the candidate have made more than casual reference to this most pressing and vitally important problem. This represents an achievement of incalculable value. Two factors have contributed to the final result:

- A. The progress of the war in Europe and Asia and its repercussions in this country created more pressing issues.
- B. The unifying of the medical profession and the effectiveness of its protests made of the "health and medical practice problems" a most dangerous and undesirable issue.

In spite of many vigorous protests, and in some instances the actual demands of contributors, the non-political, non-partisan status of the institution has been rigidly maintained. It will be maintained. For—win, lose, or draw—whether Mr. Willkie is elected or Mr. Roosevelt is re-elected for a third term—the real problem remains. There will be the urgent need for eternal vigilance and effective action, on the part of the unified profession, if the basic requirements of independent medical practice are to be preserved amid the welter and tumult of changing conditions which will prevail after the election issue is finally settled.

The N.P.C. must be in a position to deal with the problem on its merits, and regardless of the political complexion of the new administration. It is our belief that the nature of the need for future action and the methods to be employed may be affected by the results of the November 5 election. However, the basic problem remains. A firm foundation has been laid and much progress has been made. We hope, under these circumstances, that we can look forward with confidence to a continuation and an extension of your interest and support.

The exact program and methods cannot be accurately defined until after the November 5 result is known. In the meantime, we truly shall welcome your comment and suggestion."

Sincerely yours,

William F. Braasch

Edward H. Skinner

N. S. Davis, III

Edward H. Cary

Management Committee

The above organization is not to be confused with an organization of similar name which operated on a partisan political basis during the recent campaign.

ZEMMER

PRODUCTS ARE DEPENDABLE

THE ZEMMER COMPANY

Prescribe or dispense ZEMMER pharmaceuticals . . . laboratory controlled . . . guaranteed reliable potency.

Write for General Price List

KA 11-40

OAKLAND STATION, PITTSBURGH, PA.

Gifts by Luzier



FINE COSMETICS AND PERFUMES MAKE IDEAL GIFTS

Gifts by Luzier include a complete line of Fine Cosmetics and Perfumes, many special Gift Packages, a wide selection of Travel Cases and Week-End Kits, and a nice selection of Toiletries for Men. A leaflet on request.

LUZIER'S FINE COSMETICS AND PERFUMES ARE DISTRIBUTED IN KANSAS BY:

C. B. BURBRIDGE, *Divisional Distributor*
P. O. Box No. 1010
Lincoln, Nebraska

DISTRICT DISTRIBUTORS

EDWIN S. KIMMEL
P. O. Box No. 582
Salina, Kansas

ELSIE HARING
10 East Tenth Street
Hutchinson, Kansas

SUB-DISTRIBUTORS

LAURA CUDDY
615 Fremont Street
Manhattan, Kansas

MYRA KIMMEL
P. O. Box No. 582
Salina, Kansas

MARY I. GREENE
301 West Fifth Street
Junction City, Kansas

LORRAINE BILLINGTON
Lorraine's Beauty Shop
Dodge City, Kansas

MEMBERS

Dr. J. W. Cheney of Wichita presented a paper on "Sulfanilamide in the Treatment of Trachoma" at the annual meeting of the American Academy of Ophthalmology and Oto-Laryngology in Cleveland, Ohio, October 6-10.

Dr. W. F. Deal, formerly of Oakley, has moved to Craig, Colorado, where he will be associated with Dr. B. M. Bailey.

Medical reserve officers called to active duty to date in Kansas and their places of service are as follows: Dr. K. R. Grigsby of Medicine Lodge to Fort Cook, Nebraska; Dr. R. E. Speirs of Dodge City and Dr. Charles Edward Basham of Eureka, to Fort Des Moines, Iowa; Dr. Joseph Reginald Henning of Ottawa to Fort Leavenworth; Dr. Marlin Carlson of Ellinwood and Dr. John A. Dillon, Jr., of Great Bend to Fort Benning, Georgia.

Dr. B. C. Gradinger, formerly of Mount Hope, is now practicing with the Hertzler clinic in Halstead.

An abstract of the article by Dr. Harold T. Gross of Manhattan which was published in the August issue of the Journal was reprinted in the October issue of the Ohio State Medical Journal.

Dr. Robert M. Isenberger of Kansas City spoke to the Kansas City Urological Society on November 7. Dr. Isenberger's subject was "Pharmacology of the Urinary Antiseptics."

Dr. E. O. King, formerly of Herington, has moved to Kansas City, Missouri, where he will practice with Dr. Graham Asher.

Dr. William C. Menninger of Topeka has recently been appointed as Regional Chairman of the Committee on Public Education of the American Psychiatric Association.

Dr. Gordon Morris has recently located at Hoxie.

Dr. D. C. McCarty, formerly of Nashville, has moved to Anthony. Dr. McCarty has recently returned from Chicago where he has been doing post graduate work in surgery.

COUNTY SOCIETIES

The Clay County Medical Society in conjunction with the Kansas Crippled Childrens Commission conducted a free clinic for crippled children in Clay Center on October 25. The physicians of the Clay County Medical Society were assisted in the clinic by Dr. E. D. Ebright of Wichita.

The Ford County Medical Society was host to the 12th Councilor District at a meeting held on October 11 at Dodge City. Speakers were: Dr. John M. Porter of Concordia who spoke on "Recognition and Management of Chronic Degenerative Diseases"; and Dr. Forest Loveland and Dr. N. E. Melencamp of Dodge City who discussed "Our Political Horizon."

The Leavenworth County Medical Society held a meeting on November 8 at 7:30 p.m. in Leavenworth. Dr. Thomas Dry of the Mayo Clinic, Rochester, Minnesota, spoke on "Commoner Heart Diseases and Their Treatment."

The Marion County Medical Society held a business

The Library of the Medical Department of the University of Kansas has every desire to be of service to the medical profession in the state. Any physician who wishes to avail himself of the facilities of the Library will be welcome both in the use of its periodicals, bound volumes of periodicals, and monographs and text-books.

Under certain circumstances, provided the volumes are not being actively used by the students, the Library will send such volumes as are needed to physicians in the state, on request, for a period of one week, provided carriage charges are paid both ways.

THE UNIVERSITY OF KANSAS
SCHOOL OF MEDICINE

PROFESSIONAL PROTECTION

SINCE 1899
SPECIALIZED
SERVICE

A DOCTOR SAYS:

*"It is a real satisfaction that when
I did need service, I got it."*

THE
MEDICAL PROTECTIVE COMPANY
OF
FORT WAYNE, INDIANA

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago
Phone Randolph 3855

JOHNSON HOSPITAL

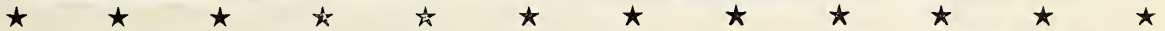
CHANUTE, KANSAS

Complete Clinical

Laboratory

Radium

X-Ray

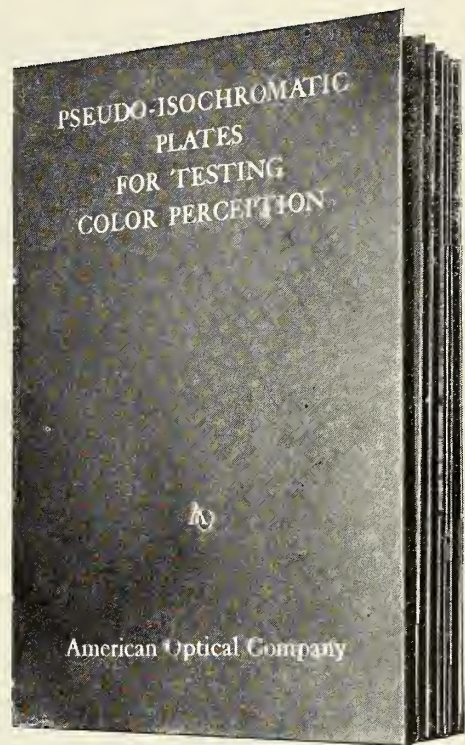


NEW ARMY-NAVY

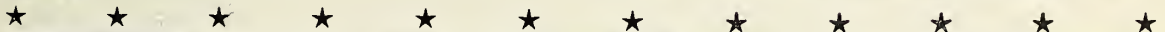
COLOR PERCEPTION TEST

AVAILABLE TO MEDICAL MEN

An American Edition of a color perception test, combining the best charts of the Ishihara and Stilling collections, is made available to the medical profession exclusively by American Optical Company. Production of this new volume of forty-six charts came after U. S. Naval personnel spent months in research which began when it became virtually impossible to obtain reliable color tests from recognized foreign sources. Addition of this new color test to our list of products is another step by American Optical Company in the interests of better vision.



By AMERICAN OPTICAL COMPANY



NEUROLOGICAL HOSPITAL

Twenty-Seventh and The Paseo
Kansas City, Missouri

Modern Hospitalization of
Nervous and Mental Ill-
nesses, Alcoholism and
Drug Addiction.

THE ROBINSON CLINIC

G. WILSE ROBINSON, M.D.
G. WILSE ROBINSON, JR., M.D.

meeting on October 9 at Marion. Dr. G. J. Goodsheller of Marion, also, showed pictures of his recent trip to Alaska.

The Montgomery County Medical Society held a meeting on October 18 at Mercy Hospital in Independence. Dr. Philip Morgan of Emporia spoke on "Functional Heart Disease." The next meeting will be held at Coffeyville on November 15.

The Sedgwick County Medical Society held a meeting on November 6 in Wichita. Guest speakers were: Dr. R. Russell Best, Associate Professor of Surgery of the University of Nebraska, who spoke on "Biliary Flush as an Aid in Surgery and Medical Treatment of Biliary Tract Diseases"; and Dr. F. Lowell Dunn, Associate Professor of General Medicine, University of Nebraska, who spoke on "Modern Undernutrition." The next meeting will be held on November 19.

The Shawnee County Medical Society held a meeting on November 4 in Topeka. The guest speaker for the meeting was Dr. A. W. McAlester III of Kansas City, Missouri, who spoke on "Practical Ophthalmic Therapy." The motion picture "When Bobby Goes to School" was also shown.

The Southeast Kansas Medical Society held a meeting in Parsons on September 23. Speakers were: Dr. William McKinney of Joplin who spoke on "Relationship of Tuberculosis to Silicosis"; Dr. Jess E. Douglas of Webb City, Missouri, who discussed "The Treatment of Tuberculosis Caused by Silicosis" and Dr. E. C. Duncan of Fredonia who spoke on "Political Outlook in Regard to the Practice of Medicine." Wives of members were guests at a turkey dinner. The following officers were elected for next year: Dr. John V. Sherman of Chanute, President, and Dr. C. S. Stotts of Fredonia, Secretary-Treasurer.

The Wabaunsee County Medical Society held a meet-

ing on November 8 at Eskridge. Dr. Philip Morgan of Emporia spoke on "Heart Disease."

The Wilson County Medical Society Held a dinner meeting in Neodesha on October 14. The next meeting will be held on November 11 in Fredonia.

The Wyandotte County Medical Society met in Kansas City on November 5. Dr. Henry M. Winans, Professor of Medicine of Baylor University Medical School, Dallas, Texas, spoke on "Anemia—Diagnosis of Difficult Cases." The next meeting will be held at the Kansas City Chamber of Commerce on November 19.

DEATH NOTICES

Dr. John Newton Beasley, age 66, died October 20 at his home in Topeka. Dr. Beasley was born at Anna, Illinois, on September 28, 1874. His father, a pioneer physician, came to Kansas in 1888 and settled in Carbondale. Dr. Beasley was graduated from the St. Louis College of Physicians and Surgeons in 1897 at which time he came to Carbondale. In 1906 he removed to Topeka. He was a member of the Shawnee County Medical Society.

Dr. Carl Christian Gunter, age 59, of Palco, formerly of Aurora, died September 24 of arterial hypertension in Concordia. Dr. Gunter was born in Germany and was graduated from the St. Louis College of Physicians and Surgeons in 1911. He was a member of the Cloud County Medical Society.

ANNOUNCEMENTS

American Board of Obstetrics and Gynecology announces the written examination and review of case histories (Part I) for Group B candidates will be held in the various cities of the United States and Canada on Saturday, Janu-

THE ARNOLD DRUG COMPANY

523 KANSAS AVENUE

TOPEKA, KANSAS

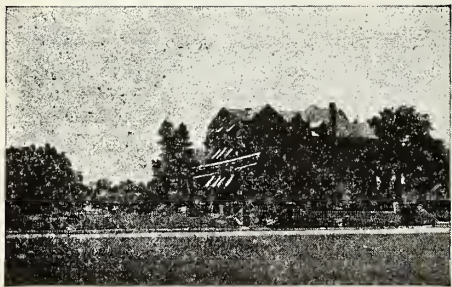
We Have Catered to the Medical Profession for 71 Years With Ethical Products

ELI LILLY—ABBOTT AND SHARP AND DOHME

Nothing Finer Made

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the A.M.A.

As an Adjunct in the Treatment of Alcoholism

'Benzedrine Sulfate' is admittedly not a solution of the difficult problem of alcoholism, but *is* a valuable adjunct in cases which can be properly supervised.

Acute Alcoholism

Amplifying and confirming a previous report, Reifenstein and Davidoff (N. Y. State J. Med., 40:247, 1940) used 'Benzedrine Sulfate' orally and intravenously* in a carefully-controlled series of more than 100 institutionalized alcoholics, with and without psychosis. In almost all cases, states of alcoholic depression were quickly relieved.

"In the acute alcoholic psychoses the length of time necessary for recovery was considerably diminished, frequently by half, and the number of recoveries was slightly increased."

"In the acute phases of alcoholic intoxication amphetamine sulfate has been most effective. Likewise the characteristic physiologic and psychologic after-effects of acute inebriation have been dissipated quickly by the drug."

Chronic Alcoholism

Working with institutionalized patients, Reifenstein and Davidoff did not find 'Benzedrine Sulfate' therapy satisfactory in chronic alcoholism.

In private practice, on the other hand, Bloomberg had good results in a series of twenty-one closely supervised chronic alcoholics. (New Eng. J. Med., 220:129, 1939). He suggested that the use of 'Benzedrine Sulfate' may permit a sufficient interval of sobriety for the institution of the usual and more fundamental psychotherapeutic approaches.

Initial dosage should be small, 1/4 to 1/2 tablet (2.5 mg. to 5 mg.). If there is no effect, this should be increased progressively. Normal dosage is from 1 to 3 tablets (10 mg. to 30 mg.) daily, one-half of the dose at breakfast and the other half at noon.

*Physicians wishing to use 'Benzedrine Sulfate Ampules' may obtain them on direct order from us.



BENZEDRINE SULFATE TABLETS

Each tablet contains 10 mg. amphetamine sulfate, S. K. F. (approximately 1/6 gr.)

SMITH, KLINE & FRENCH LABORATORIES • PHILADELPHIA, PA. • EST. 1841

ary 4, 1941, at 2:00 p.m. Formal notice of the place of examination will be sent each candidate several weeks in advance of the examination date. No candidate will be admitted to examination whose examination fee has not been paid at the secretary's office. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination to be held in June 1941. The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting at Cleveland, Ohio, from May 28 to June 1, 1941, immediately prior to the opening of the annual meeting of the American Medical Association.

Application for admission to Group A, (Part II) examinations must be on file in the secretary's office not later than March 15, 1941. After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations. The Board wishes to announce a modification of the case record ruling effective January 1, 1942, as it appears in the September 1940 issue of the Board booklet. This ruling should read: "It is preferable that the number of cases submitted should not be more than half, twenty-five of the total number of fifty cases required." For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

The Department of Obstetrics and Gynecology of the University of Chicago and the Chicago Lying-in Hospital through the cooperation of the Children's Bureau, U. S. Department of Labor and the Illinois State Department of Public Health offers five postgraduate courses of four weeks each between January 6 and June 21. The beginning dates of each are: January 6, February 10, March 17, April 21, and May 26. All the members of the department and all services and units of the institution participate in the instruction. Only a limited number of postgraduate students are accepted for each period. A deposit of \$25.00 is required, of which \$10.00 is returned on completion of the course. All communications should be addressed to: Postgraduate Course, 5848 Drexel Avenue, Chicago, Illinois.

Over 600 dermatologists from all parts of the United States and Canada are expected to attend the third annual meeting of the American Academy of Dermatology and Syphilology at the Palmer House, Chicago, December 8-11. There will be over sixty lectures on the program from Monday, December 9, through Wednesday, December 11. Sessions will be in the form of symposia, special lectures in courses of one to four hours each; numerous luncheon round-table discussions, and clinical presentations at the University of Illinois Medical School in Chicago. Guest speakers include Dr. Cyrus C. Sturgis, Professor of Medicine, University of Michigan, speaking on "Diseases of the Blood and Blood Forming Organs—their relation to the skin and mucous membranes" (Monday morning); Dr. William F. Petersen, Professor of Pathology, University of Illinois, speaking on "The Patient, His Skin and the Weather" (Wednesday afternoon), and Dr. Elmer L. Sevringhaus, Professor of Medicine, University of Wisconsin, who speaks Tuesday afternoon on "Endocrines and Their Relation to Dermatology." The annual banquet is scheduled for Tuesday evening. Symposia and their leaders include: Symposium on Physiology and Chemistry of the Skin, Dr. Donald M. Pillsbury; Symposium on Pharmaceutical Therapeutics, Dr. Otto H. Foerster. (Both to be held on Tuesday.) Symposium on Allergy, Dr. Samuel M. Peck, and Symposium on Syphilis, Dr. Udo J. Wile, to be held on Wednesday. There will also be special courses in histopathology, mycology and x-ray and radium-therapy.

The United States Civil Service Commission announces that enough applications have been received to meet the prospective need for temporary and part-time civilian medical officers in connection with the Army expansion. Receipt of applications close on Monday, October 14. The Commission calls attention to the fact, however, that there is an urgent need for medical officers and senior and associate medical officers to fill permanent positions in other agencies. Applications will be received until further notice. The positions pay from \$3,200 to \$4,600 a year. Fourteen specialized branches of medicine are included. There is also an urgent need to fill junior medical officer positions at \$2,000 a year at St. Elizabeths Hospital, Washington, D. C. Full information and application forms for these examinations may be obtained at the office of the Secretary, Board of U. S. Civil Service Examiners or at any first- or

Phone
3-3261

The OVERTON ELECTRIC CO., Inc.

522
Jackson

Specializing in all forms of
FLUORESCENT LIGHTING.



Buy the finest
HY - GRADE
LAMPS—Look
for the Red
Triangle.

AN ELECTRICAL SERVICE
THAT IS COMPLETE.

TOPEKA

S. D. THACHER, President

KANSAS

THE TROWBRIDGE TRAINING SCHOOL

Established 1917

A HOME SCHOOL for NERVOUS and BACKWARD CHILDREN

The Best in the West

Beautiful Buildings and Spacious Grounds. Equipment Unexcelled. Experienced Teachers. Personal Supervision given each Pupil. Resident Physician. Enrollment Limited. Endorsed by Physicians and Educators. Pamphlet upon Request.

1850 Bryant Building

E. HAYDEN TROWBRIDGE, M.D.

Kansas City, Mo.



Here, my young friends, have a stick of Chewing Gum.

Thank you, Doctor. Everyone in our family likes to chew gum.

How more and more Doctors are building good will the CHEWING GUM WAY

You naturally want children to feel that you are their friend. One sure, inexpensive way to gain their good will and friendship is to offer them a stick of wholesome Chewing Gum.

Today many physicians everywhere are using Chewing Gum as a good will builder in their offices. It's a delightful pastime that's beneficial and wholesome. Offer Chewing Gum to your young patients today.

The National Association of Chewing Gum Manufacturers, Rosebank, Staten Island, New York U-186

DOCTOR - PATIENTS LIKE THIS
CHOCOLATE - FLAVORED EMULSION
OF LIQUID PETROLATUM!

TASTES LIKE THE CHOCOLATE IN A
DELICIOUS DESSERT

- Your patients will not object to taking this Emulsion of Liquid Petrolatum Chocolate Flavored. There is no oily after-taste! It has the appearance and the flavor of the chocolate in a delicious chocolate dessert. It may be obtained without phenolphthalein — or with 5 grains or 1½ grains to the fluid ounce. This product contains 60% Liquid Petrolatum U. S. P. and 1% Agar Agar.

The SMITH-DORSEY COMPANY

LINCOLN, NEBRASKA

Manufacturers of
Pharmaceuticals to the Medical Profession Since 1908

Council
Accepted



● A PRESCRIPTION PRODUCT DESIGNED ESPECIALLY FOR PHYSICIANS (note prescription label on the bottle).

THE SMITH-DORSEY CO.
LINCOLN - NEBRASKA

MAIL THIS COUPON

Gentlemen: Please send me a sample of Emulsion Liquid Petrolatum Chocolate Flavored

☐ With Phenolphthalein

☐ Plain

Dr.

Address

City

State

second-class post office, or from the U. S. Civil Service Commission, Washington, D. C., or from any of the Commission's district offices.

The Board of Trustees of the American Medical Association has selected June 2-6, 1941, as the date for the Ninety-second annual session of the Association to be held at Cleveland, Ohio, announced the Journal in its August 24 issue.

BOOKS RECEIVED

BACILLARY AND RICKETTSIAL INFECTIONS, ACUTE AND CHRONIC, A Textbook—Black Death to White Plague—William H. Holmes, M.D., Professor of Medicine, Northwestern University Medical School, Chairman, Department of Medicine Passavant Memorial Hospital, Chicago. Published by the Macmillan Company, New York, 1940. Price \$6.00. Containing 676 pages.

GRADUATE MEDICAL EDUCATION IN THE UNITED STATES—From 1937 to 1940. Published by the Council of Medical Education and Hospitals of the American Medical Association. 1940.

THE 1939 YEAR BOOK OF GENERAL SURGERY—Edited by Evarts A. Graham, M.D. Published by the Year Book Publishers Inc., 304 South Dearborn Street, Chicago, Price. \$3.00.

AN INTRODUCTION TO MEDICAL MYCOLOGY—George M. Lewis, M.D., and Mary E. Hooper, M.S. The

Year Book Publishing Company, Chicago. Price \$5.50, containing 333 pages and seventy-one illustrations.

AUXILIARY

PRESIDENT'S MESSAGE

Because we are Americans and for countless other reasons we give thanks at this season. We pity the peoples of the world who are overburdened with uncertainty and dangers. May we use our every opportunity to strengthen our country, by doing our bit in our own communities.

We have about 1400 doctor's wives who are eligible for membership in our Auxiliary in Kansas. How many are there in your county? We need the help of every eligible member.

December is the month when we can sell Hygeia subscriptions for gifts to our friends and at reduced rates to our doctors. We can always use Hygeia in formulating our own programs and programs for lay groups.

Let us send to the American Medical Association office for posters listing the radio broadcasts "Doctors at Work" and place them in doctors reception rooms, public libraries, schools, drug stores and

SILVER PICRATE

Wyeth

is indicated in the treatment of

Silver Picrate is a definite crystalline compound of silver and picric acid. Available in the form of crystals and soluble trituration for the preparation of solutions; suppositories; water-soluble jelly; and powder for insufflation.

- ★ Acute Anterior Urethritis
(due to *Neisseria gonorrhoeae*)
- ★ *Trichomonas Vaginalis*
Vaginitis
- ★ Vaginal Moniliasis
- ★ Bartholinitis and Skeneitis
(due to *Trichomonas Vaginalis*)

Complete information mailed on request

★ JOHN WYETH & BROTHER, INCORPORATED ★
PHILADELPHIA, PA.

How irritation varies— from different cigarettes

Tests made on rabbits' eyes reveal the
influence of hygroscopic agents*

- | | | |
|---|------------------|--|
| 1 | Edema 0.8 | Cigarettes made by the Philip Morris method |
| 2 | Edema 2.1 | Cigarettes made with no
hygroscopic agent |
| 3 | Edema 2.7 | Popular cigarette #1
—made by the ordinary method |
| 4 | Edema 2.6 | Popular cigarette #2
—made by the ordinary method |
| 5 | Edema 2.7 | Popular cigarette #3
—made by the ordinary method |
| 6 | Edema 2.7 | Popular cigarette #4
—made by the ordinary method |

CONCLUSION:* Results show that regardless of blend of tobacco, flavoring materials, or method of manufacture, the irritation produced by all ordinary cigarettes is substantially the same, and measurably greater than that caused by Philip Morris.

CLINICAL CONFIRMATION:** When *smokers* changed to Philip Morris, every case of irritation of the nose and throat due to smoking cleared completely or definitely improved.

* * *

*N. Y. State Journ. Med. 35 No. 11, 590. **Laryngoscope 1935, XLV, No. 2, 149-154

other places that will call the broadcasts to the attention of the public. This is excellent public relations work.

Mrs. J. W. McGuire of Neodesha our legislation chairman, is mailing your president or legislative chairman a splendid legislative program with a list of references for information along this line. Let's use it for study and passing information on to lay groups. We must have the light of knowledge ourselves before we can impart it to others.

Our National Board meeting will be in Chicago, on November 29, and I plan to attend. Our State Board meeting will be in Parsons, on December 3, and we are expecting a nice representation.

The Hand Book can be purchased for forty cents from Mrs. S. H. Harrington, 3722 Cragmont Street, Dallas, Texas.

Mrs. Irma Blasdel.

Recently I was appointed state chairman for the Bulletin of the National Women's Auxiliary. In accepting this honor I am pleading for the cooperation of every Auxiliary member in Kansas. Have you read the October bulletin? It's great. Be sure to buy, borrow or steal a copy and read for yourself the many helpful and interesting articles in it.

Read the plans and policies of the Public Rela-

tions chairman, Mrs. Henry Raile; study the article on Legislation by Mrs. Herold, chairman of the committee on legislation, and consider thoughtfully the platform of the American Medical Association which each member is asked to memorize. Then there are suggested programs which are most helpful; in fact there are so many things about which we must concern ourselves, and all these the bulletin supplies. Through it one may keep abreast of the trends of the medical world and be better able to function as members in carrying out the aims of the auxiliary.

A bulletin chairman has been appointed in each county auxiliary who will care for subscriptions.

Mrs. H. L. Scales.

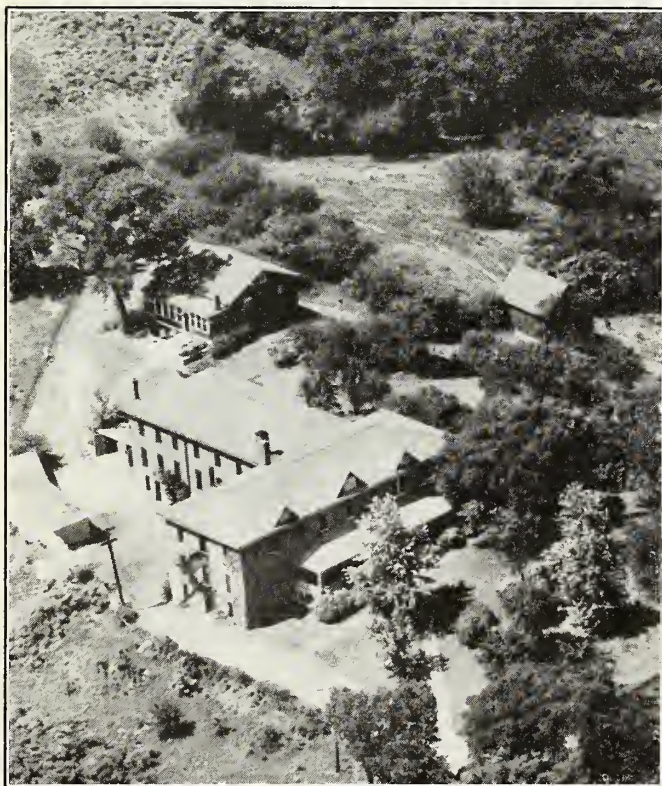
Mrs. Charles H. Werner, National Organization Chairman gives us the following list of books to read in the fall supplement to the national bulletin:

The Achilles Heel of American Medicine.

Priceless Heritage. (This will be sent out with our December news letter.)

The ads published in the Saturday Evening Post, and the propaganda articles mentioned in those ads.

"The Case for Private Medicine" in Nation's Business, May, 1940, the fifth of a series of articles on free enterprise against dictocracy.



Grandview Sanitarium

26th & Ridge Ave.

KANSAS CITY, KANSAS

A beautifully located sanitarium, twenty acres overlooking the 100-acre City Park, especially equipped for the care of:

Nervous Diseases

Mild Psychoses

Drug Habit

and Inebriety

The treatment is based on the most advanced ideas in medicine and is under competent medical advisers.

City Park Car line passes within one block of the Sanitarium.

Phone—Drexel 0019

Send for Booklet

E. F. DeVILBISS, M.D., Supt.

Office 1124 Proff Bldg.

KANSAS CITY, MO.

... Technique

Correct typography and perfect printing is as essential in the well ordered professional office as any other physical equipment. Master Craftsmen plan and execute every piece of printed matter. The growing list of publications, books, periodicals, magazines, and broadsides is a guarantee of superior and forceful attention compelling publicity. Call today . . .

PHONE 5956

SERVICE PRINT SHOP

for COMPLETE
PRINTING SERVICE

1515 LANE

TOPEKA, KANSAS

ABRAHAM LINCOLN

Many Years Ago Said —

"Buy your goods at home, then you have the goods and the money both, but if you buy your goods from foreign concerns, soon the goods are gone and you have nothing."



QUINTON-DUFFENS OPTICAL COMPANY

TOPEKA

HUTCHINSON

SALINA

Your Local Independent Wholesaler

Drink
Coca-Cola
Delicious and
Refreshing

**THE
DRINK
EVERYBODY
KNOWS**

The articles in A. M. A. Journal and state Journals about proposed legislation, such as the Wagner Act.

"The Doctor's Wife" by Dr. Rock Sleyster.

FOR SALE—Ten bed, fully equipped hospital in town of 1700 population. Write Mrs. Florence Funk, Smith Center, Kansas.

FOR SALE—Medical Library, 165 volumes, Tice, Sajous, Dictionaries, Hand-books, etc. Also some laboratory equipment. Write, C. F. Deaver, Sabetha, Kansas.

FOR SALE—McKesson Gas Oxygen machine for use of oxygen and nitrous oxide and four tanks (empty) also a Burdick, Infra Red light. Write Mrs. H. J. Terrill, 205 E. 13th Street, Ottawa, Kansas.

FOR SALE—Complete office equipment for Eye, Ear, Nose and Throat of the late J. Frank McNaught, M.D., Girard, Kansas. Description and prices on request. Mrs. Ethel McNaught, Girard, Kansas.

WANTED—Resident doctor, village and rural practice at Alden in Central Kansas; partially equipped office of late Dr. David T. Muir for rent; good roads; pleasant community; large territory; expenses small; hospitals eight and fourteen miles. Write or call Mrs. D. T. Muir, Alden, Kansas.

FOR SALE—Entire office equipment, including electro-therapy machines, instruments, treatment and instrument tables, fluoroscope, library, drugs, etc. Write or call, Miss Floy Liston, Baldwin, Kansas.

The address of Dr. Rock Sleyster, outgoing president, June 22, A. M. A. Journal.

The address of Dr. N. B. Van Etten, new president, June 22.

The editorial, June 22.

The Resolution on Medical Preparedness, June 22.

Remarks of Dr. Irvin Abell on Preparedness, June 29, A. M. A. J.

Health and Medical Preparedness — Dr. Parran, July 6, A. M. A. J.

These are all interesting and informative and should prove good study material for local units.

*86c out of each \$1.00 gross income
used for members benefit*

**PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION**



Hospital, Accident, Sickness

INSURANCE



**For ethical practitioners exclusively
(52,000 Policies in Force)**

LIBERAL HOSPITAL EXPENSE COVERAGE	For \$10.00 per year
\$5,000.00 ACCIDENTAL DEATH \$25.00 weekly indemnity, accident and sickness	For \$33.00 per year
\$10,000.00 ACCIDENTAL DEATH \$50.00 weekly indemnity, accident and sickness	For \$66.00 per year
\$15,000.00 ACCIDENTAL DEATH \$75.00 weekly indemnity, accident and sickness	For \$99.00 per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

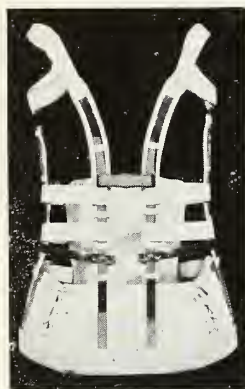
\$9,500,000 PAID FOR CLAIMS

**\$200,000 deposited with State of Nebraska for
protection of our members.**

**Disability need not be incurred in line of duty—benefits
from the beginning day of disability.**

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

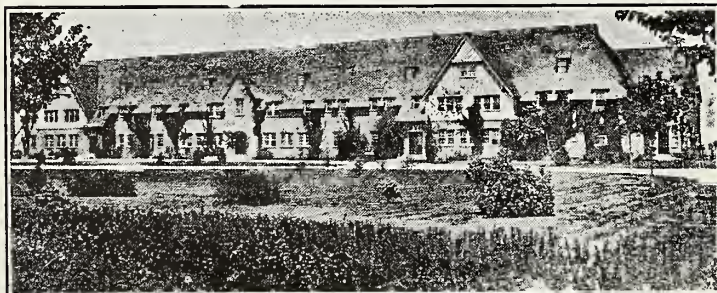


The
W. E. ISLE CO.
PHONE VICTOR 2350
2ND FLOOR-1121 GRAND
KANSAS CITY, MISSOURI

All types orthopaedic
appliances made in
our own factory.

CAPABLE FITTERS

WOODCROFT HOSPITAL



PUEBLO, COLORADO

Founded 1896 by Dr. Hubert Work

A modern, newly constructed
sanitarium for the scientific
care and treatment of those
nervously and mentally ill, the
senile and drug addicts.

CRUM EPLER, M.D.

Superintendent

THE JOURNAL OF THE KANSAS MEDICAL SOCIETY

Owned and Published by The Kansas Medical Society

Volume XLI

DECEMBER, 1940

Number 12

PREOPERATIVE AND POST- OPERATIVE MANAGEMENT OF GALL BLADDER DISEASE*

Raymond W. McNealy, M.D.**

Chicago, Illinois

The pre and postoperative care of patients with gall bladder disease has received a great deal of attention during the past few years. The technical details incident to difficult cases of gall bladder and common-duct surgery continue to hold considerable interest for those who do the routine general surgical practice. In the larger medical centers and especially in the large charity services one is impressed with the number of patients who, when they present themselves for surgery on the gall bladder, are in poor shape to withstand this or any other type of major surgery.

In private practice one sees a great many more ambulatory, fairly comfortable patients who are not acutely ill, but who in the course of an examination have been shown to be the host of either a non-functioning gall bladder or gall stones. These patients are not to be compared with those sick patients who occupy the beds in our large hospitals, and the surgical risk is entirely different.

Gall bladder disease may mean anything from a very mild physiological dysfunction to a complete histological disorganization with the most extensive disturbance of physiology in the liver, kidneys and pancreas.

The intimate relationship of the organs of the right upper quadrant of the abdomen and their common contribution to the processes of digestion of food links them almost inseparably in physiologic activity and pathologic change. This is especially true of the gall bladder which may become the seat of gall stone formation as a result of a disturbed relationship between the amount of cholesterol in the bile and the concentration of bile acids. It is a

well-known fact that gall stones are common in women who have had repeated pregnancies. It has been shown that during the later months of a pregnancy there is a decided increase in the cholesterol content of the blood. During the puerperium the bile may contain unusually large amounts of cholesterol. The bile acids secreted by the liver at this time may not keep pace with the cholesterol content of the bile and this may result in the precipitation of cholesterol crystals in the gall bladder. This does not explain all gall stone formations for undoubtedly other factors are equally important.

The ability of the gall bladder to concentrate its contents may be an important factor in the production of gall bladder disease. It seems logical to conclude that if certain chemical products which are present in the bile were to be concentrated beyond a certain degree this concentrated material might then prove irritating to the gall bladder. This type of chemical inflammation has been produced experimentally. It is reasonable to suppose that under certain circumstances the body itself may produce chemical compounds which when eliminated in the bile and concentrated by the gall bladder may contribute to an irritation of this organ.

It is unfortunate that many regard the gall bladder as an organ similar to the appendix and speak for its removal in disease in about the same way that they would of the appendix. This concept can lead to serious trouble. It is true that the human being can get along fairly well without a gall bladder. This is attested to by the large number of people who have had their gall bladders removed in early life and live comfortably to an old age.

While it may be quite a chore in some instances to remove a gall bladder due to the technical difficulties, it is much more common to have the serious complications develop from those conditions which arise outside of the gall bladder area itself. Much has been said recently about the necessity of operating on acute cholecystitis in the early hours of the disease. There is not time to discuss this question further than to say that no inflammatory condition of the biliary tract is such an emergency that the patient should be deprived of a thorough physical examination including blood count, urine analysis

*Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 14, 1940.

**Associate Professor of Surgery, Northwestern University Medical School, Chicago, Illinois.

and blood chemistry study. The chemical and water balances of the patient must be established and the liver should be bolstered by the intravenous use of glucose solution.

As mentioned before it is the chronic gall bladder condition, in which there has been an insidious undermining of the general health of the individual, that is most likely to find the patient poorly prepared for surgery. The liver is a most important organ in the human and its functions are so numerous that discussion of these would consume much time and lead us from our immediate thesis.

Since our problem of preparation of these patients with gall bladder disease depends so much on the liver and its activities, it is unfortunate that no universally dependable test of the liver's general efficiency has been developed to date. Probably the most reliable test of liver function which has been brought forth lately is that advocated by Armand Quick. It depends on the administration of a measured amount of sodium benzoate and its recovery in the urine as hippuric acid. The hippuric acid content secreted within the first two hours following administration is determined and this transposed into terms of sodium benzoate. The principle of the test depends on the presence in the liver of adequate amounts of amino-acetic acid (glycine) in whose presence sodium benzoate is conjugated and hippuric acid formed. While this test has value it is not sufficiently delicate to be thoroughly dependable in those borderline cases which are the ones usually misjudged. We use it routinely as a safeguard against overlooking very severe grades of liver exhaustion.

In the absence of accurate indices of the liver functions and the associated changes in other metabolic and reparative processes of the body, a very broad view of our responsibilities must be taken. In addition to the usual and customary safeguards which are thrown around any abdominal operation, special attention must be given to liver lethargy and bile secretion and absorption.

Glycogen storage and mobilization are exceedingly important functions of the liver. While muscle glycogen comprises the largest amount of stored carbohydrate in the body, it is the liver glycogen which is first depleted by fasting. It has been shown repeatedly that livers with a low glycogen content are more susceptible to injury. The ability of the liver to store glycogen is an index of its functional capacity. This organ may store, at one time, as much as 300 Gm. (10 ounces) of glycogen readily subject to glycogenolysis with formation of glucose. The value of selective diet in jaundice is emphasized by the experimental work by Mann and Bollman who showed that jaundiced dogs failed to sur-

vive a diet of meat for more than a brief period, but would live several months on a diet of milk and syrup.

A diet high in carbohydrates should be given where the patient can take food. It has been our practice to allow the patient to have a rather liberal diet if no vomiting or colic is present. The use of cereals, gruels, jellies, jams, syrups and fruit juices is encouraged. Large amounts of sugar may be given in the form of Dexin***. This sugar seems well tolerated and produces little distress from fermentation. Green salads and citrus fruits are given with dressings of a very palatable type made with mineral oil. The protein side of the diet should be limited to milk and egg proteins.

Where food cannot be taken or urgency exists, it becomes necessary to resort to parenteral glucose administration. The practice of giving glucose solutions per rectum is of doubtful value. In studies made by the writer and others, it was shown that little glucose is absorbed from the colon. It would seem more practical to administer glucose either subcutaneously or intravenously. A five per cent solution in distilled water properly buffered may be used for either. The amount and rate of administration demand some caution. When given intravenously the rate should not exceed two drops per second and should preferably be slower. The usual practice is to give about 3000 to 4000 c.c. of five per cent solution in twenty-four hours. The urine is tested frequently the first and second days of use and if no sugar appears in the urine, tests are made daily thereafter. The initiation of glucose therapy should not be delayed until the last minute and then pushed so rapidly that untoward reactions appear and much of the sugar spills over in the urine. It should be started as soon as the patient becomes a surgical prospect and continued until the convalescence is definitely established and the patient is able to ingest a near maintenance value of easily assimilable carbohydrates.

The use of insulin to facilitate glycogen storage is suggested by Lukens who states that glucose and insulin together produce the maximum storage of glycogen in both normal and diabetic animals. In diabetics or those patients with a low sugar tolerance, the intravenous glucose is covered with insulin. Where diabetes is present, one should guard against excessive doses of calcium because of its tendency to raise blood sugar levels. Insulin is not used in routine cases.

Since we began the rather routine use of glucose solution intravenously as a means of fortifying the liver, we have made careful observations of the patient's ability to store glucose. It has been our

***Dexin is a product of Burroughs Wellcome & Company.

habit to give a five per cent glucose solution in distilled water at the rate of 500 c.c. in sixty minutes. Twenty minutes after this amount has been infused a specimen of urine is examined and another 500 c.c. is then started, and twenty minutes after its infusion a second urinalysis is made. If no sugar appears in the urine of either specimen, it suggests that the liver is in good condition. If no sugar appears in the first specimen and only a trace in the second, it suggests that the liver is in fair condition, but if sugar appears in the first and shows an increased presence in the second specimen it suggests a poor risk. No doubt there are many objections which might be offered to the acceptance of this routine as a very good test of liver function, yet we feel that it offers considerable aid when used in conjunction with other tests.

The importance of maintaining water balance in surgical patients has been stressed by Coller and others. In the jaundiced patient it is very necessary to maintain this balance and to favor elimination. If adequate amounts of fluids cannot be taken by mouth then plain tap water by proctoclysis will serve adequately in most cases. Where some impairment of renal functions exists it is better to use tap water than normal salt solution per rectum. In patients whose twenty-four hour output of urine is less than 1000 c.c., and where no serious kidney lesion can be demonstrated, the intravenous administration of 500 to 1000 c.c. of ten per cent glucose may increase the urine output. Faltitschek and Hess point out that cellular impairments of the liver, if they reach a severe degree, cause disturbances in the water balance. They suggest that there is also a renal factor concerned in the disordered water economy of patients with liver disease. Here again, there probably is a vicious circle whose interruption may prove a considerable task. Every jaundice patient should have regular preoperative urinalyses. Where the jaundice is severe or has existed for some time or the kidneys show a diminished output in the presence of adequate intake, the functional capacity of the kidneys should be investigated and blood chemistry studies made. Means to combat nitrogenous retention and oliguria are those commonly employed in renal dysfunction without jaundice. Coller has shown that at least 3000 c.c. of fluids must be introduced in each twenty-four hours to maintain a water balance. This may be done orally, subcutaneously or per rectum as indicated.

The liver is necessary for deamination of amino acids, synthesis of urea and destruction of uric acid. In liver damage, protein metabolism is impaired and excess amounts of protein waste products tend to accumulate. A low protein diet will avoid further embarrassment to an already overtaxed liver. Pro-

tein feeding increases the bile-salt production. Since retained bile salts may account for some of the toxemia in jaundice, it would seem important to limit protein intake both before and after operation.

The liver is also the principal site of formation of fibrinogen and exerts a regulatory influence over the albumin-globin ratio of the blood plasma. The fairly constant disturbance of the albumin-globin ratio in liver damage suggests the use of this finding as a prognostic aid. When present, this should serve as a warning against surgery except under the most unusual circumstances.

The work of Whipple indicates that the liver is intimately associated with production of hemoglobin. Snell suggests that a patient who has a chronic hepatic lesion is poorly equipped to adjust himself to even the less severe degrees of anoxemia because of the limitation in production of hemoglobin.

In the presence of jaundice with its associated hepatic damage, blood transfusions have a favorable influence. More hemoglobin is supplied, thus increasing the oxygen capacity of the blood. There is a better saturation of the arterial blood with oxygen which occurs either as a result of an improvement in the general circulation or in some change in the character of the blood. There also occurs an increase in the functional capacity of hemoglobin. In discussing the value of blood transfusions in jaundiced patients, Judd refers to the work of Rich who noted atrophy of cells around the central veins of the hepatic lobules, presumably the result of an oxygen deficiency. Anoxemia results in liver damage and the damaged liver in turn perpetuates the anoxemia by its limited production of oxygen carrying hemoglobin. In most cases one or two, or in desperate risks, even more transfusions of 500 c.c. of blood should precede surgery.

The proper quantity and the mode of administration of calcium vary considerably according to different writers. Oral administration has been used less frequently in recent years, as the rate of absorption is regarded as too slow for practical purposes. Recent experiments by Ivy would tend to show that the rate of absorption of calcium given orally depends to some considerable degree on the presence of adequate free hydrochloric acid in, and the rate of emptying of the stomach. Since many patients with gall bladder disease may have an achlorhydria the use of peroral calcium might be questioned in these cases. In most instances a more rapid and intense effect is had by the use of soluble salts intravenously. Those most commonly used are ten per cent solutions of calcium chloride or calcium gluconate. These may be had in ampoule form ready for use and are usually given in ten c.c. amounts once or twice daily. The chloride produces a very marked

necrosis of the overlying tissues if any escapes during or after injection. The gluconate is much less irritating and may even be given intragluteally to prolong the action.

The liver plays an important role in vitamin synthesis and storage. In the jaundiced patient the liver may be damaged so that absorption, synthesis and storage of vitamins may be deficient. If adequate bile does not reach the intestinal tract there occurs a marked disturbance of fat digestion and absorption. Ingested fat appears in large quantities in the feces of animals whose bile is diverted from the intestinal tract. It is reasonable, therefore, to expect those vitamins which are fat soluble to be excreted along with the undigested fat. The best-known fat soluble vitamins are A, D and K.

VITAMIN A

Vitamin A acts by increasing the ability of the body to resist disease. It is suggested that it has to do with the maintenance of intact, healthy epithelial membranes which constitute the first line of defence against bacterial invasion. The principle source of vitamin A is in fats of animal origin. Schmidt and his co-workers presented evidence that absorption of vitamin A, in the form of cod liver oil, occurs in the absence of bile in the intestine, but beta carotene, the precursor of vitamin A, is not absorbed in the absence of bile. Since cod liver oil is not an item in the average diet, it is likely that the vitamin A intake is almost wholly ingested in the form of carotene.

As a precautionary measure against deficiency it would appear that vitamin A in concentrated form should be administered as a routine part of the pre-operative preparation in those patients who give a history of long standing gastro-intestinal disturbances and especially in those who show a low blood platelet count. In severe obstructive jaundice it may be given parenterally or if given orally it should be administered along with bile salts. It has been our practice to use commercial ox or pig bile in five to seven grain doses three times a day. Our use of commercial ox or pig bile seems warranted because Horrall, Still and their associates have analyzed a number of these products and find them to contain sufficient bile acids and salts to act on the fats in the alimentary canal and enhance the action of lipase. The use of dehydrocholic (triketocholelonic) acid (decholin) is contraindicated in obstructive jaundice and it should not be used as a substitute for the whole bile mentioned above. Dehydrocholic (triketocholelonic acid (decholin) acts as a choleric, increasing the flow of bile. Its use after the release of the obstruction in jaundice has been a routine procedure in our cases. In some instances the

twenty-four hour output of bile has been augmented by fifty per cent following its administration.

VITAMIN D

The functions of vitamin D are to facilitate the absorption of calcium and phosphorus from the intestine and maintain the level of calcium and phosphorus in the blood. It increases the net retention of calcium in the body in ordinary doses. Like vitamin A, its absorption rate from the intestine bears a distinct relation to the fat absorption rate, which in turn is dependent on the presence of bile in the intestinal tract. This fact was established by Greaves and Schmidt in 1932 and confirmed by Taylor in 1935. The importance of an adequate vitamin D absorption has been established in clinical practice by the work of McNealy, Shapiro and Melnick and further substantiated by the recent work of Johnson and by Boys of Ann Arbor. The method of administration commonly employed is to give thirty drops of viosterol, 250 D, three times a day. Viosterol is usually administered in conjunction with the carotene and commercial ox or pig bile as was described under vitamin A therapy.

VITAMIN C

Vitamin C is the water soluble anti-scorbutic element which occurs in fresh foodstuffs, fruit juices, and vegetables, and is found in small amounts in fresh milk and raw meat juice. The absence of vitamin C from the diet produces a condition known as scurvy, whose characteristic symptom is hemorrhage. The hemorrhages may be due to changes in the vessel walls. It is possible that vitamin C controls the nutrition of the endothelium of the capillaries. At the present time estimations are being made of the cevitic acid concentration in the blood of all patients suffering from gall bladder disease who are admitted to our service at Wesley Memorial Hospital.

One of my associates, Dr. Gubler, has been making a study of the deficiency states which result from restricted dietary regimes commonly exhibited in patients with gall bladder dysfunction. Several instances of subclinical scurvy have been noted. It is possible that this may be an important hemorrhagic factor in some jaundice cases. It is, at least, an indication for regular estimation of vitamin C in chronic cases and if a deficiency state is found, it should be corrected. Orange juice sweetened with glucose will be efficient if the patient can take food by mouth. If parenteral administration is necessary it may be given subcutaneously in daily .025 to .050 mg. doses of cevitic acid until a normal level is reached.

VITAMIN K

This is a fat soluble vitamin which occurs in hog's liver, some fish, soybeans and alfalfa. Dam and Hen-

drick showed that a deficiency in the diet of chicks produced a hemorrhagic disease. McCoy states that a deficiency in vitamin K causes a hemorrhagic disease in humans which resembles scurvy, but is not relieved by citrus fruit juice and cevitamic acid. Snell has advocated the use of vitamin K along with oral administration of bile as a means of combating the hemorrhagic tendency in jaundice.

It is rather generally accepted that the hemorrhagic tendency which we are familiar with in obstructive jaundice bears a close relationship to the prothrombin level of the blood. Prothrombin is a complex protein which is in all probability produced in the liver. In jaundiced patients the lowered prothrombin level may be brought about by a failure of the liver to produce an adequate amount of prothrombin or by a destruction of prothrombin in excess of its production.

Hemorrhagic tendencies usually do not become manifest until the prothrombin level has reached the neighborhood of twenty per cent of its normal concentration. It has been found that the administration of vitamin K either as a natural concentrate or one of the synthetic substitutes having the general formula (2-methyl-1:4-naphthoquinone) has been found to raise a low prothrombin content of the blood plasma. The exact steps in the synthesis of vitamin K into the complex protein prothrombin are not known. It is reasonable to assume that the structure of vitamin K makes it a convenient fraction for the liver to convert into prothrombin.

The administration of vitamin K by mouth does not insure its absorption in every instance. To insure its passage from the intestinal tract into the circulation and to the liver it is necessary to have bile salts present in the intestine. Even if these two requirements are fulfilled there still remains the necessity of a good functioning liver to synthesize this precursor into prothrombin.

At present, attention is being centered on the importance of certain synthetic products as readily available sources of vitamin K. In a study of the hemorrhagic tendency in jaundice McNealy, Shapiro and Melnick showed that the administration of viosterol with bile salts produced very favorable results. At the time this work was published in 1935 it was thought that vitamin D was an important factor in the hemorrhagic tendency. Dam and Glavind state that the only fat soluble vitamin which is known to prevent hemorrhagic diathesis is vitamin K. It has been shown that vitamin K can be synthesized during the spoilage of foodstuffs and that a number of bacteria, including the colon bacillus and the bacillus subtilis are capable of synthesizing a fat soluble anti-hemorrhagic factor. Bac-

terial putrefaction of fish meal was one of the early methods employed in vitamin K concentrates.

It has occurred to the author that some fraction of the viosterol may be useful to the liver in its synthesis of prothrombin. It is also possible that bacterial action on the viosterol may have produced a fraction which was made available to the liver for ultimate conversion into prothrombin. While these are purely conjectures the fact remains that excellent results have followed the use of viosterol and bile salts in the author's hands as well as in the hands of many others. Our inability to explain the exact method of action does not militate against the favorable effects achieved. One must not neglect the important fact that it is not the vitamin K, but prothrombin which is deficient in the blood. Even vitamin K must undergo a synthesis by the liver to be effective. This makes it imperative that the liver be in a functioning state in order that vitamin K or any other prothrombin precursor may be synthesized by the liver. Where liver damage is excessive no other method of direct introduction of prothrombin can be substituted for blood transfusion.

VITAMIN P

This is a water soluble vitamin found in lemons and red peppers. It is described as a vitamin which controls permeability of the capillaries. Its definite place is not yet established.

Postoperatively our problem differs little from the usual care of patients who have had operations on their gastro-intestinal tract. The maintenance of a water and chemical balance must be studiously adhered to. The urine output should be kept close to 1000 c.c. in twenty-four hours. The sudden influx of bile unchanged by delay in gall bladder or ducts may encourage regurgitation into the stomach, with persistent vomiting. In such cases the duodenal suction tube should be inserted early to avoid the accumulation of bile in the stomach.

SUMMARY

The preparation of the patient with "gall bladder disease" includes all of the precautionary and rehabilitative measures which should precede every major operation.

In addition it should include measures directed especially toward improving the functions of the liver.

The diet should be rich in carbohydrates and poor in proteins.

The water balance should be regulated.

In chronic cases blood chemistry studies should be made where there is indication of disturbance of renal function.

Glucose should be administered in adequate

amounts. An isotonic, properly buffered solution in distilled water may be used intravenously or subcutaneously.

Normal salt solution should be given in sufficient amounts to overcome the loss of salts by vomiting or diarrhoea.

Blood transfusions are of definite value.

The use of calcium salts intravenously is indicated.

Vitamin deficiencies should be corrected by the administration of fat soluble vitamins A, K and D and the water soluble vitamins C and P.

Orally administered bile preparations are used to facilitate the absorption of fat soluble vitamins.

THERAPY IN PNEUMONIA*

Ralph H. Major, M.D.**

Kansas City, Kansas

William Osler, in the first edition of his well-known "Principles and Practice of Medicine" published in 1892 remarks that, "Pneumonia is one of the most fatal of acute diseases. Hospital statistics show that the mortality ranges from twenty to forty per cent." In the sixth edition of the work, published in 1907, the edition I used as a student, Osler notes, that, "Pneumonia has become the 'Captain of the Men of Death,' to use the phrase applied by John Bunyan to consumption." He continues, "Pneumonia is the most fatal of all acute diseases, killing more than diphtheria, and outranking even consumption as a cause of death. The mortality at the Johns Hopkins Hospital has been about twenty-five per cent in the whites, and thirty per cent in the colored."

Subsequent editions of Osler's "Practice of Medicine" continue to stress the gloomy prognosis of lobar pneumonia. Thus the eleventh edition revised by McCrae and published in 1930, states that, "In America the mortality appears to be increasing . . . Between the ages of twenty-one and thirty the mortality is about twenty per cent; between the ages of thirty-one and forty, thirty per cent; and then after each decade it rises, until above the age of sixty more than one-half die." The last edition of Osler's "Practice," revised by Christian and published in 1938, gives the same mortality statistics and an additional mortality table in which the cases are divided according to the type of pneumococcus present, shows a mortality of nearly twenty-seven per cent. Carefully compiled mortality statistics from various parts

of the world show that over the period of a century the mortality from lobar pneumonia has varied from twenty per cent to thirty per cent and that these figures remained stationary during this period despite the various attempts to improve this mortality rate.

If the mortality in lobar pneumonia remained unchanged for a century, it should not be thought for a moment that the physician was idly sitting by merely watching his patient die or only hoping for his recovery. Quite the contrary. The medical literature of this century is filled with accounts of specific treatment and cures for lobar pneumonia. Their number is almost legion. It reminds one of the remark of Lassar, made in 1905, that, "One hundred and twenty-five causes of syphilis have been established during the last twenty-five years." Some of these suggested methods of therapy had perhaps a certain value; others were worthless and still others apparently harmful.

Roche, in 1927, thought he had a specific treatment for lobar pneumonia. His treatment consisted of thyroid extract and potassium permanganate, the latter injected subcutaneously in doses of 100 c.c. of 0.1 per cent solution. He reported five cases with recovery and then disappears from the literature. Hoppe, Goldsmith and Freeman, in 1926, published a paper with the title, "The truth about mercurochrome used in the treatment of pneumonia in children." They treated ninety cases with mercurochrome and employed ninety cases as controls. In lobar pneumonia, the mortality in the control group was ten per cent, in the mercurochrome treated group five per cent; while in bronchopneumonia, the figures were forty-two per cent for the control group and ten per cent for the cases treated with mercurochrome. Other observers did not report the same experience with mercurochrome and it presently dropped out of the therapeutic armamentarium. Grant, Mulberry, and Weaver, in 1926, reported on sodium citrate in the treatment of pneumonia. They gave their patients forty grains of sodium citrate every two hours, and conclude, "In lobar pneumonia, it is almost specific. No comparable results have been obtained by any other method." This method of treatment did not, however, find any wide application.

Quinine has been employed in the treatment of pneumonia for more than seventy years. In recent years interest in this drug has revived. Daichowsky, in 1926, reported twenty cases treated with quinine showing a mortality of five per cent as compared with twenty per cent in his controls. Berger, in the same year, reported a mortality of three per cent in thirty-two cases treated with quinine. Similar statis-

*Presented at the 81st Annual Session of The Kansas Medical Society, Wichita, May 16, 1940.

**Department of Internal Medicine, University of Kansas School of Medicine.

tics have been published by Aufrecht and Petzold, Cahn and Bronner, and by Nicolaysen.

The treatment of pneumonia with a quinine derivative—hydroxylethylapocupreine has interested several observers. Maclachlon, Johnston, Bracken and Crum treated 136 patients with this drug and studied 329 cases as controls. The mortality in the treated cases was 24.9 per cent as compared with fifty per cent in the controls. Their observations cover the years 1935-1938, and the mortality seems unusually high.

On reviewing the literature on the treatment of pneumonia with quinine and quinine derivatives, one obtains the impression that these drugs do have a favorable influence on the course of the disease.

The use of oxygen in the treatment of pneumonia has been a much debated topic for the past ten years. With the great improvements in the methods of administering oxygen, the profession has been extensively circularized by the firms who manufacture this apparatus, which is often quite fascinating in appearance. It has also become quite well-known to the lay public, which has also been so impressed that the doctor treating a patient with pneumonia is afraid that he may be accused of negligence if he does not employ oxygen.

The literature on this subject is largely couched in generalities. It is difficult to prove its value. However, no one denies the remarkable effect of oxygen in cases of heart failure or its effect upon the cyanosis of pneumonia. Our practice has been to employ it in cases of pneumonia showing cardiac distress, or cyanosis. Anoxemia results from a lack of oxygen and anoxymia produces cyanosis. It certainly would seem rational to give oxygen when there is a lack of oxygen.

The employment of digitalis in the treatment of pneumonia precipitated a controversy, the echoes of which are still with us. A. E. Cohn, in 1917, stated that "digitalis did not harm and might be life saving," and reported that all pneumonia patients at the hospital of the Rockefeller Institute were given digitalis as a routine. This practice was soon introduced into the hospitals of New York City, and from there spread throughout the country.

Shepherd and Steinberg, in 1924, reported that "Digitalis may be used in massive doses without much danger of a toxemia," and that "massive doses of digitalis are helpful in pneumonia and favorably modify the course of the disease." Many similar reports soon appeared in the literature.

There were, however, certain skeptics. Niles and Wycoff in 1927 formed a committee to study the effects of digitalis in pneumonia. In 1930, they published their report, which showed that the mortality in 338 digitalis treated cases was 41.4 per

cent, as compared with 33.7 per cent in 404 patients who received no digitalis. While making due allowance for statistical errors, these figures at least fail to prove that the routine use of digitalis has a beneficial effect on pneumonia. Personally, we agree with Arnett, that "the routine use of digitalis in pneumonia is unwise" although we should not deny it to patients with cardiac failure or fibrillation, and should not expect the same results from it as in cardiac patients with no pneumonia.

In this controversy over digitalis, medical history again repeats itself. During the nineteenth century, the routine administration of digitalis in pneumonia was extensively studied in Germany. In 1899 Aufrecht stated that he had abandoned the routine use of digitalis because of toxic effects observed.

Those of us who had an opportunity of seeing and treating pneumonia in the army during the World War will recall the high hopes aroused then by the anti-pneumonic sera used on a large scale in the various army hospitals. I remember well a conversation I had in 1918 with a hard-boiled major in the medical corps. This officer had visited many base hospitals and seen much of pneumonia. When he visited us, we were working day and night typing patients' sputum and then dashing off to the hospital with supplies of the serum indicated.

"You fellows are doing a good work," he commented, puffing away at his pipe. "It's a fine thing to be busy, it keeps a fellow out of trouble. But as for this antipneumococcic serum, it's the bunk."

I started to argue with him that the antipneumococcic serum had reduced the mortality from twenty-five per cent to seven per cent at Camp Grant. "I know all about that," he answered, "I just came from Camp Grant." As I had not been to Camp Grant, I said nothing, but continued typing pneumococci.

Soon after the war, Dr. E. A. Locke, at the Boston City Hospital, undertook a study of the effectiveness of antipneumococcic serum. His results are shown in Table I

Henry M. Thomas, in 1923, published the following table. (Table 2.)

From this table, we note that only in pneumonia caused by Group I pneumococcus and treated with Group I antipneumococcus serum, is there any very suggestive evidence of the therapeutic effect. The experience of the past seventeen years has agreed in the main with the conclusions of Thomas.

The mortality picture which had changed but little for a century, with the probable exception of that for Group I pneumonia, seems not to be changing. This new development which began in 1933

is an absorbing story, a drama which is still unrolling before our eyes.

On the seventeenth of May, 1933, Dr. Foerster read before the Düsseldorf Dermatological Society a paper with the title, "Sepsis following an extensive periporitis. Cure with Streptozon."

Foerster reported, "It was a boy, age ten months. Three months previously, a periporitis appeared which continually spread. In addition, septic complications appeared. Blood culture positive for staphylococci. His general condition grew steadily worse. All therapeutic efforts were fruitless. The child was on the verge of death. A trial with Streptozon, one-half tablet twice daily by mouth, produced an astonishing change. After treatment for four days, the temperature fell gradually to normal. He slowly gained weight. The hemoglobin rose from twenty-two per cent to forty-two per cent. General condition good. The preparation was administered, with brief intermissions, for three weeks."

In discussing this case, Dr. H. T. Schreus remarked, "The preparation Streptozon was given me by the I. G. Farbenindustrie by chance at the very moment when the child was almost dead. The immediate effect is all the more remarkable, since this was a staphylococcus infection, while Streptozon was recommended as effective only against streptococci."

"There brief remarks," as Perrin Long has written, "introduced the world the chemotherapeutic agent which was soon to be known as 'Prontosil' and which, in the opinion of many observers, constitutes the greatest therapeutic discovery in modern medicine. It is also of interest to note in this brief report that although the substance by label was indicated as a remedy against streptococcal infection, its first reported use was in a staphylococcal infection. In retrospect, this fact might be prophetic of the manner in which Prontosil and allied chemotherapeutic agents were used in the next few years."

The story of the development of prontosil is not without interest. In 1908, Gelmo, a German chemist, synthesized para amido benzene sulfonamide, or sulfanilamide. The following year, chemists associated with the I. G. Farbenindustrie developed a series of dyes with sulfonamide and substituted sulfonamide groups. These dyes were designed for textile purposes and many of them were used in the trade. Five years later, in 1914, several observers noted that some of these dyes were highly bactericidal in test tube experiments. Further study at this time was interrupted by the World War.

The patent for prontosil was granted by the German Patent Office in 1932, although its basic form had been patented as early as 1920. In 1933, the first clinical report, which I have read, appeared in

the literature. The following year, 1934, two articles by Grütz and by Veil appeared, and in 1935, Gerhard Domagk's classic paper, "Ein Beitrag zur Chemotherapie der bakteriellen Infektionen" (A Contribution to the chemotherapy of bacterial infections) appeared in the *Deutsche Medizinische Wochenschrift*. Domagk's work was entirely experimental and his observations date from 1932. He stated simply that prontosil, a relatively non-toxic dye, protected mice from a fatal hemolytic streptococcal infection, and cured hemolytic streptococcal and staphylococcal infections in rabbits. Domagk also stated that prontosil had no bactericidal action in the test tube, but "acts as a true chemotherapeutic agent only in the living animal." In the same issue of the *Deutsche Medizinische Wochenschrift* were three clinical reports describing excellent results with prontosil in the treatment of hemolytic streptococcal angina, thrombophlebitis, erysipelas, infected abortions, acute arthritis, otitis media, and in infections of the urinary tract caused by the colon bacillus.

These reports impressed the English and French. As Lawrence P. Garrod remarked in his paper in the *Lancet*, "The early reports, such as those of Foerster and Grütz, might have indicated to anyone with a careful eye on the German literature that something new was brewing." The same year that Domagk's paper appeared, Prof. Fournneau prepared a hydrochloride of sulfanilamide which French observers claim was as effective as prontosil.

This momentous work with prontosil attracted little attention in this country for some time. To quote Long, "One can search volumes 105 and 106 (1935) of the *Journal of the American Medical Association* without finding any reference to the investigations being carried out in Germany and France. The noted number of the *Deutsche Medizinische Wochenschrift* which contained the original reports of Domagk and his collaborators was not even mentioned in the abstract section of the *Journal*, nor did these extraordinary reports impress the 'Berlin Correspondent,' as there is no mention of the newer chemotherapy in his weekly dispatches. The first mention of the compounds in the *Journal* was an abstract of Meyer-Heine and Huguenin's paper from *La Presse Médicale*, and is to be found on page 2113 of the June thirteenth issue of the *Journal of the American Medical Association* in 1936."

Public interest in the new drug was stimulated in this country by press reports that President Roosevelt's son, who was suffering from a streptococcal sore throat was snatched from the jaws of death through the use of the new powerful German remedy—prontosil. If our interest lagged at first, we

soon made handsome amends. In the year 1938 American firms alone produced more than seventy-six tons of 152,000 pounds of sulfanilamide compounds, enough to treat at least 175,000 people for ten days. Every magazine editor, newspaper publisher and reporter, every high school teacher and almost every child in the public school in the third grade and above has heard that magic word—sulfanilamide.

The spectacular results obtained with sulfanilamide in streptococcal infections suggested at once its employment in pneumonia. Soon articles appeared in the European and American medical literature describing the favorable therapeutic effect of sulfanilamide in pneumonia. Louis reported six cases of lobar pneumonia treated with sulfanilamide, all recovered. Heintzelman, Hadley and Mellon reported nine cases of type three pneumonia treated with sulfanilamide and ten control cases. The mortality of the untreated cases was seventy-four per cent, for the treated cases twenty per cent. Sadusk reported nine cases of pneumonia due to the pneumococcus type three, treated with sulfanilamide. All recovered. These results were spectacular since the average mortality for type three pneumococcus pneumonia exceeds forty per cent.

The spectacular results obtained with prontosil and sulfanilamide were the signal for intensive investigations upon various compounds which could be formed from sulfanilamide. The year after prontosil was placed on the market, the I. G. Farbenindustrie announced that they had synthesized 1000 derivatives of sulfanilamide. Laboratories all over the world took up the problem and today some 4000 odd derivatives have been synthesized. Only a fraction of this number have been studied in the laboratory and in the clinic, but already some very interesting and promising compounds have been developed.

One of the best-known of these derivatives is sulfapyridine. This drug was apparently first manufactured by May and Baker, and called, "M & B 693." Shortly afterwards it appeared in France under the name of "Dagenan," and in Germany, with the name of "Eubasin." This compound was introduced for the treatment of pneumonia.

It is interesting to compare the table of Thomas (Table 2) with the results obtained by Evans and Gaisford, who published the first clinical report on the use of sulfapyridine in pneumonia. In this article, which appeared in the *Lancet*, July 2, 1938, they reported one hundred cases which had received the drug. The treated cases showed a mortality of eight per cent, the untreated cases a mortality of twenty-seven per cent.

This report was followed by numerous reports

in the literature all showing that this drug apparently reduced the mortality in pneumonia. In the January twelfth issue of the *Deutsche Medizinische Wochenschrift*, 1940, (Table 3), Wurm of Freiburg has collected some interesting statistics on the effectiveness of sulfapyridine on pneumonia. He has collected 2156 cases of pneumonia treated with sulfapyridine showing a mortality of 6.4 per cent, while 1676 untreated cases had a mortality of 17.8 per cent—nearly three times as great.

We began treating pneumonia with sulfapyridine in 1938 and, while our experience is quite limited as compared with the large numbers I have just quoted, our results have convinced us that sulfapyridine is a therapeutic agent of great value in pneumonia.

One of the interesting properties of sulfapyridine is its anti-pyretic effect. Aside from its bactericidal effects, it produces also a fall in temperature. This may or may not coincide with its specific effect upon the infection.

Long has stated that several of his patients developed hematuria in the course of sulfapyridine therapy. There are several similar reports from other observers and we have seen one such complication. The hematuria is caused by the formation of acetylsulfapyridine calculi in the renal tubules and pelvis. If hematuria develops, the drug should be discontinued. It has been suggested that the routine administration of sodium bicarbonate will alkalize the urine and prevent the formation of calculi. This complication is, however, relatively rare, and there is, as yet, no positive proof that sodium bicarbonate will prevent it.

The most annoying and most common complication of sulfapyridine therapy is nausea, often with vomiting and hiccoughing. Large doses of bromides or barbiturates have been employed, but the most effective drug for this complication, in our experience, is nicotinic acid. We usually employ fifty to 100 mg. by mouth three or four times daily.

In many patients, the nausea may make it impossible for the patient to take tablets of sulfapyridine by mouth. In such instances, we employ fifty c.c. of a five per cent solution of the sodium salt intravenously two to three times daily, and have also used thirty per cent solutions intramuscularly in doses of five c.c. or more.

Within the past year, another compound has been synthesized. This compound is sulfathiazole, which gives promise of being even more valuable than sulfapyridine. Sulfathiazole was described in 1939, by Fosbinder and Walter, and by Lott and Bergeim in papers published in the *Journal of the American Chemical Society*. About the same time, a similar compound, sulfamethylthiazole, appeared. These two

compounds are now undergoing extensive clinical trial.

Extensive laboratory tests by McKee and co-workers indicate that sulfathiazole is quite as effective as sulfapyridine, against the pneumococcus meningococcus and hemolytic streptococcus, while it is more effective than sulfapyridine in staphylococcal infections.

As yet, we must await clinical testing before we can draw final conclusions regarding the effectiveness of sulfathiazole as compared with sulfapyridine. From reports now available, it appears to be just as effective, and, according to many men, successful. Our own experience with it has been very limited. We have, however, treated ten cases of pneumonia with sulfathiazole without a death. Dr. Blake at New Haven tells me that he has had 100 cases of pneumonia treated with sulfathiazole with a mortality of only three per cent, and he adds that these three were elderly patients. Although our experience with sulfathiazole has been limited, we have been impressed with the fact that it only rarely produces that disagreeable feature which complicates the use of sulfapyridine—nausea and vomiting. With sulfapyridine, nausea and vomiting are almost the rule if medication is prolonged; with sulfathiazole, they rarely occur.

These achievements in the therapy of pneumonia are certainly impressive, and incline us to agree with the statement previously quoted, that the introduction of prontosil which started us on this remarkable course, "constitutes the greatest therapeutic discovery in modern medicine." And the final chapter has not been written. We have probably only completed the preface.

TABLE I

MORTALITY, RATE, 145 TREATED: SEVENTY-ONE CONTROL CASES (BOSTON CITY HOSPITAL)

	Number Cases	Number Deaths	Mortality Per cent
Group A	75	13	17.3
Group B	70	12	17.1
Totals	145	25	17.2
Control Group B	71	12	16.9

TABLE II

COMPARISON OF DEATH-RATE IN TREATED AND CONTROL SERIES
Antibody Wards:

Type	Cases	Deaths	Rate Per Cent
Pn. I	158	21	13.3
Pn. II	83	23	27.7
Pn. III	73	29	39.7
Pn. IV	110	18	16.4
Total	424	91	21.4
Strept., etc.	48	24	50.0
Unclass.	36	14	38.8
Grand Total.....	508	129	25.3

Control Wards:

Type	Cases	Deaths	Rate Per Cent
Pn. I	162	36	22.2
Pn. II	67	27	40.3
Pn. III	60	24	40.0
Pn. IV	121	29	24.0
Total	410	116	28.3
Strept., etc.	35	12	34.3
Unclass.	47	20	42.5
Grand Total.....	492	148	30.0

BIBLIOGRAPHY

1. Arnett, John H: The use of digitalis in coronary artery disease and in pneumonia. *New International Clinics*, vol. 1:243-249, 1938.
2. Berger, W.: Quinine in pneumonia. *Wein klin. Wchnschr.* 39:937-942, Aug. 12, 1926; cont. 39:969-972, Aug. 19, 1926; cont. 39:996-999, Aug. 26, 1926.
3. Cohn, A. E.: Digitalis in pneumonia. *J. Exper. Med.* 25:65, Jan. 1917.
4. Daichowsky, J. J.: Treatment of pneumonia (quinine) *Klin. Wchnschr.* 5:412-415, March 5, 1926.
5. Domagk, Gerard: Ein Beitrag zur Chemotherapie der bakteriellen Infektionen. *Deutsche med. Wchnschr.* 61:250-253, Feb. 15, 1935.
6. Evans, G. M., and Gaisford W. F.: Treatment of pneumonia with 2-(p-aminobenzenesulphonamido) pyridine. *Lancet* 2:14-19, July 2, 1938.
7. Foerster: quoted by Long and Bliss.
8. Fosbinder, R. J., and Walter, L. A.: Sulfanilamido derivatives of heterocyclic amines. *Jr. Am. Chem. Soc.*, 61:2032, 1939.
9. Garrod, Lawrence P.: quoted in Long and Bliss.
10. Gelmo: quoted in Long and Bliss.
11. Grant, S. C., and Weaver, W. H.: Sodium citrate in treatment of pneumonia. *J. Arkansas M. Soc.* 22:180-184, Jan. 1926.
12. Grütz, O.: quoted by Long and Bliss.
13. Heintzelman, J. H. L., Hadley, Philip B. and Mellon, Ralph R.: The use of p-aminobenzenesulphonamide in type 3 pneumococcus pneumonia. *Am. J. Med. Sc.* 193:759-763, 1937.
14. Hoppe, L. D., Goldsmith, L. H., and Freeman, W. T.: Truth about mercurochrome used in treatment of pneumonia in children; report of 180 cases. *Arch. Pediat.* 43:694-696, Oct. 1926.
15. Locke, Edwin A.: The treatment of type I pneumococcus lobar pneumonia with specific serum. *J.A.M.A.* 80:1507-1510, 1923.
16. Long, Perrin H., and Bliss, Eleanor A.: *Clinical Use of Sulfanilamide and Sulfapyridine and Allied Compounds*. Macmillan Company, New York, 1939.

TABLE III

Authors	Cases treated with Sulfapyridine			Cases not treated with Sulfapyridine		
	Total No.	Died	Per Cent	Total No.	Died	Per Cent
Evans and Gaisford.....	100	8	8	100	27	27
Gaisford	about 700	.....	8	335	.....	23.6
Pepper, Flippin, Schwartz and Lockwood.....	400	28	7	.....	.....	.....
Agranat, Dreosti, Ordmann—I	27	2	7.4	27	6	22.2
..... IIa	156	1	0.6	157	5	3.2
..... IIb	71	6	8.5	86	16	18.6
Graham Warner, Dauphinee and Dickson.....	50	3	6	with serum 50	6	12
.....	.....	.....	.....	without serum 30	7	23
Smith and Needles.....	70	6	8.5	678	.....	37
Anderson and Dowdeswell	50	1	2	50	8	16
Meakins and Hanson.....	30	1	3	.....	.....	.....
Hegler	90	4	4.4	243	72	30
Riehm	36	4	11	.....	.....	.....
Löffler, Hegglin and Maier	34	3	9	.....	.....	.....
Römcke and Voigt.....	342	.....	5.8	.....	.....	.....

17. Lott, W. A., and Bergeim, F. H.: 2-(p-aminobenzenesulfonylamido) thiazole: a new chemotherapeutic agent, *Jr. Am. Chem. Soc.* 61:3593, 1939.
18. Louis, D. J.: The treatment of pneumonias with sulfanilamide. *Illinois Med. J.* 73:422-425, 1938.
19. Machlachlan, P. L., Johnston, J. M., Bracken, M. M., and Crum, G. E.: Treatment of pneumococcal pneumonia by hydroxyethylapocupreine. *Am. J. M. Sc.* 197:31-39, Jan. 1939.
20. McKee, C. M., Rake, G., Greep, R. O., and VanDyke, H. B.: The therapeutic effect of sulfathiazole and sulfapyridine. *Proc. Soc. Exper. Biol. & Med.* 42:417, 1939.
21. McKee, C. M., Rake, G., Greep, R. O., and VanDyke, H. B.: Observations on the pharmacology of sulfathiazole and sulfapyridine. *Proc. Soc. Exper. Biol. & Med.* 42:410, 1939.
21. Niles, Walter L., and Wyckoff, J.: Studies concerning digitalis therapy in pneumonia. *Am. J. M. Sc.* 180:348-356, Sept. 1930.
22. Roche, N. J.: Thyroid and manganese treatment in acute pneumonia. *Brit. M. J.* 1:459-460, March 12, 1927.
23. Sadusk, J. F.: Sulfanilamide therapy in pneumonia with 2-(p-aminobenzenesulphonamido) pyridine, *Lancet* 2:14-19, July 2, 1938.
24. Shepherd and Steinberg, B.: Massive doses of digitalis in pneumonia. *Virginia M. Monthly* 51:327-329, Sept. 1924.
25. Schreus, H. T.: quoted by Long and Bliss.
26. Thomas, Henry M., Jr.: Modern methods of treating lobar pneumonia. *Am. J. M. Sc.* 166:877-883, Dec. 1923.
27. Veil, W. H.: quoted by Long and Bliss.
28. Wurm, K.: Übersicht über die bisherigen Erfahrungen mit Sulfanilamid-Pyridin (Eubasin M. & B. 693, Dagenan) in der Weltliteratur, *Deutsche med. Wchschr.* 66:43, Jan. 12, 1940; 73, Jan. 19, 1940; 102, Jan. 26, 1940.

PARTIAL SPONTANEOUS PNEUMOTHORAX

Hugh M. Swaney, M.D.*

Goodland, Kansas

Galen M. Tice, M.D.**

Kansas City, Kansas

Spontaneous pneumothorax as an unqualified term has probably been known or at least suspected from the beginning of recorded medicine. Hippocrates gives a rather complete description of the succussion splash which remains as one of the signs of value in diagnosing this condition with its accompanying pleural effusion. In 1803 Itard¹ used the term pneumothorax in designating the existence of air in the pleural cavity and recognized its relation to tuberculosis. Laennec², in 1819, gave a thorough description of the symptoms and physical signs of pneumothorax which has been but little improved upon up to the present time.

Due to the lack of controlled studies on numerous large groups of individuals, the exact incidence of this disease process is uncertain. Nevertheless it is apparent that partial spontaneous pneumothorax is prone to occur in the age group of twenty to thirty. Furthermore the true incidence is difficult to determine because of the well established fact that the condition usually occurs with little or no symptoms and the potential patient may disregard its onset and course without seeking the counsel of a physician. Blackford³ has conducted an interesting study

on college students in which he observed fifteen cases, eleven of which occurred within five years in a student body of 2500; this is an incidence of approximately one case per thousand students in each school year. He also reports on Wilson's⁴ study of Yale students in which the latter found five cases of silent pneumothorax in routine chest roentgenograms, these cases were all without symptoms. Many of the other reports in the literature concern themselves solely with those cases occurring in the newborn and in infants.

In considering the etiology of this condition we can usually place the precipitating factor in one of the following three classes:

- I. Mechanical
- II. Infectious
- III. Congenital defect of the lung

These are the etiological agents in those cases which have been proven by autopsy; obviously there still remains the group which we are forced to refer to as idiopathic, however, it seems entirely logical that these too can be placed in one of the above three classes.

Etiology has been established in case reports by: Hayes⁵ who gives a resume of six cases all of which were tubercular in origin but only one of which could be termed partial pneumothorax. His contention is that all cases of spontaneous pneumothorax have a tubercular etiology even though the lung involvement is of a minimal degree.

Silver⁶ presents a case which gives roentgenological evidence of emphysema of the right lung from mechanical obstruction of the right bronchus prior to rupture of the pleura and resulting spontaneous pneumothorax.

Gasul and Singer⁷ report a case of bronchopneumonia which progressed to suppuration and rupture of the softened focus permitting the escape of air into the pleural cavity.

Weiner⁸ cites the case of a child of four and one-half months with a partial pneumothorax of three months duration which at autopsy was found to have a communication between a branch of the upper part of the left bronchus and the pleural cavity.

Donahoe⁹ adds these factors as etiological agents in children:

1. Injury by foreign bodies in a bronchus
2. Rupture of inflammatory area
3. Tuberculosis
4. Rupture of alveoli following effort of inspiration when air passages are blocked by amniotic fluid
5. An abscess of bronchi or lung
6. As a complication of pertussis, pneumonia or empyema.

*Formerly a member of the Student Health Service, Kansas State College, Manhattan, Kansas.

**From the Department of Radiology, University of Kansas School of Medicine, Kansas City, Kansas.

Hotz¹⁰ reports an interesting case of a girl five days old with a partial pneumothorax on the right side. At the age of twelve days the right side was normal but there was a pneumothorax on the left side. The child had a large thymus gland which increased the dyspnea and may have been the etiological factor. He points out that constantly increasing intra-alveolar tension results in stretching of the lung tissue with final rupture, the latter occurs near the free margin of the lung and may be easily overlooked at the autopsy table.

Other etiological factors to be considered are rupture of any emphysematous bleb, cyst of the lung near its periphery, tearing of the pleura by adhesions when there are abnormal lung excursions as in sneezing, coughing or violent excursions of the lung following strenuous exercise; or a solitary air vesicle with a valve-like arrangement in its base which would permit gradual distention and finally rupture.

A theory has been advanced in regard to the etiology in children which may also be applicable to adults, i. e., that the three lobed right lung has a larger factor of safety than the two lobed left lung, also that the large right lobe of the liver may offer a certain amount of protection to the right lung.

Charr¹¹ reports a study of ten cases of spontaneous pneumothorax having a fatal termination, eight of these had pulmonary tuberculosis and two had anthracosis. Seven of the cases had rupture of the visceral pleura in the midaxillary line, the other three cases had ruptured on the anterior surface of the lung. His observation in explanation of this is that the anterior and axillary portions of the thorax move more than the posterior portions where the ribs are attached to the vertebrae. He further states that the left side is more frequently involved than the right probably because the heart action produces an additional pulmonary mobility on the left side. As previously stated the underlying pathology is often indefinite, however, the findings are more or less constant following the onset of symptoms. There is air in the pleural cavity, a variable amount of fluid in the corresponding costophrenic angle, and a partially or completely collapsed lung. If air alone escapes into the pleural cavity the pleura shows no pathologic changes with the exception of the rent or tear in the visceral pleura. The involved¹² lung becomes more or less atelectatic and if the condition persists over a long period, fibrosis occurs and the lung may remain permanently incapable of reexpansion. To a large extent the degree of pneumothorax is determined by the size of the opening in the pleura and the underlying lesion, however, in those cases which occur secondarily to chronic disease, the extent of the pneumothorax may

be limited by pleuritic adhesions. If the pleural opening is valve-like permitting the continued escape of air into the pleural cavity a so-called "high tension pneumothorax" occurs in which the normally negative pleural pressure is changed to a positive pressure.

The characteristic of the symptoms is their sudden onset with no apparent reason, the sudden sharp pain usually associated with the onset is due¹³ to air suddenly rushing into the pleural cavity where there is a negative pressure. The pain² is usually felt in the midaxillary region but may be referred to the scapula or beneath clavicle. The pain is usually more severe on deep inspiration. The intensity of the pain may increase for several hours but usually begins to subside within a short time after the onset. It may persist in a mild form as long as there is any residuum of the pneumothorax as in one of our cases in which the pain persisted in a mild form for approximately one month following the onset. Horine¹⁴ reports three cases, two of which were partial pneumothoraces of the left side. The interesting observation on these cases was that all presented symptoms referable to the heart, the first case presenting a history of sudden pain in the precordium which was transmitted to the left shoulder. All three had the following symptoms in common; heart consciousness, dyspnea, and pain in the chest. Other symptoms usually related are shortness of breath, this is of variable degree, depending on the extent of the collapse and may be of sufficient severity to indicate aspiration of the encased air. Mental distress is of practically no consequence in the symptomatology of partial collapse of the lung.

The physical signs of partial spontaneous pneumothorax are somewhat bizarre as compared to the more definite signs of complete pneumothorax. There is rarely any widening of the intercostal spaces. If there is a thirty per cent (or more) collapse of one entire lung the heart is displaced toward the opposite side and its impulse is seen in a new position. Tactile fremitus² on the affected side, if felt at all, is indistinct, in the majority of cases it is absent. Percussion will usually reveal a degree of hyperresonance, the degree depending on the amount of collapse of the affected lung. Auscultation reveals the breath sounds as indistinct or entirely absent. A positive coin sound is an aid when present but can rarely be elicited in partial pneumothorax. If sufficient pleural effusion is present the pathognomonic succussion splash can be heard on shaking the patient.

An accurate diagnosis is possible in partial pneumothorax only when a satisfactory roentgen-ray examination has been made with careful inspection of the plate. This point is well taken in the carefully

reported case of Weil, Ourmansky and Dreyfus¹⁵ in which the usual physical signs were entirely absent. Incidentally this patient had a recurrent pneumothorax on the day of discharge from the hospital, the second attack resulting in a complete collapse of the lung on the affected side. The x-ray is rather characteristic in these cases revealing a partial collapse of the lung, pleural effusion, and a zone of abnormal clearness surrounding the affected lung. This zone is frequently of the mantle or "cloak" variety in which the involvement is primarily of the apex and surrounds the lung with the exception of the base. If a fluoroscopic examination is made the so-called "paradoxical contraction of the diaphragm" may be observed. However, in those cases having only a small degree of collapse with a narrow zone of air in the surrounding pleural cavity the diagnosis can be more accurately determined on an x-ray plate. Vinson¹⁶ states that pneumothorax may be overlooked in cases of bronchoscopic aspiration unless x-ray examination is made following the aspiration as the coughing and straining associated with this procedure may result in the rupture of the visceral pleura.

The prognosis of nontubercular partial spontaneous pneumothorax is excellent. Obviously the smaller the degree of pneumothorax the shorter will be the convalescent period. Some of the cases will have recurrent attacks, as did two of our cases, although these are usually not of a serious nature. Further, the pneumothorax may persist over an indefinite period as did the case of Willi¹⁷ and that of Deglos¹⁸.

The treatment can be divided into conservative and operative. The former is the treatment of choice and is largely symptomatic. Rest in bed, at least until the acute symptoms subside, and the pain controlled by barbiturates or morphine. The affected side may be immobilized by adhesive strapping and deep inspiration and coughing discouraged. Under operative treatment the only procedure of any value is the aspiration of air from the pleural cavity. This is the treatment recommended by Glaser and Landau¹⁹ for infants. However, in those cases of partial pneumothorax in adults, we believe aspiration should be confined to those cases with a high-tension pneumothorax or to those in which there has been no appreciable re-expansion after two weeks and to those cases exhibiting respiratory or circulatory embarrassment.

A REPORT OF FOUR CASES

Two With Recurrence

CASE I. L. M., male, age twenty-three, gave history of recurrent attacks of pain in upper left chest and left axillary region from the age of fifteen years, these were related to have a variable duration from a

few hours to a week. In October, 1936, a diagnosis of pleurisy was made and the chest was strapped with adhesive, following this procedure he experienced symptomatic relief in one week. He had recurrent pain in left chest posteriorly in March, 1937, at that time x-ray of the chest revealed a partial collapse of the left upper lobe. Mantoux test, (P. P. D. No. II), gave a one plus reaction at this time. Roentgenograms in April, 1937, and in August, 1938, revealed no evidence of pneumothorax. On February 2, 1940, the patient gave a history of pain in the left lower chest which had appeared three weeks previously while he was walking across a room. Three days later the pain had subsided, however, two days later while chopping wood the patient again experienced a sudden severe sharp pain in left lower chest, the pain was exaggerated on deep inspiration and on walking. At the end of two weeks he had obtained no definite relief and came in for examination. Physical examination of the chest revealed hyperresonance infra-clavicularly on the left side and an absence of breath sounds in the axillary line of the chest. There was a positive coin sound over the left lateral portion of the chest, no positive succussion splash could be elicited. X-ray examination (Fig. 1) demonstrated approximately a fifty per cent collapse of the left lung with the collapse being complete from apex to base, the heart and mediastinal structures were apparently displaced to the right. There was a small amount of fluid in the left costophrenic angle. No pathology was observed to account for the collapse. On February 19, 1940, another x-ray plate (Fig. 2) showed that there was a persistent narrow zone of pneumothorax in the upper left lateral chest, and the heart and mediastinal structures were two cms. to the left of their position on the previous graph. The patient was symptom free on March 1, 1940.

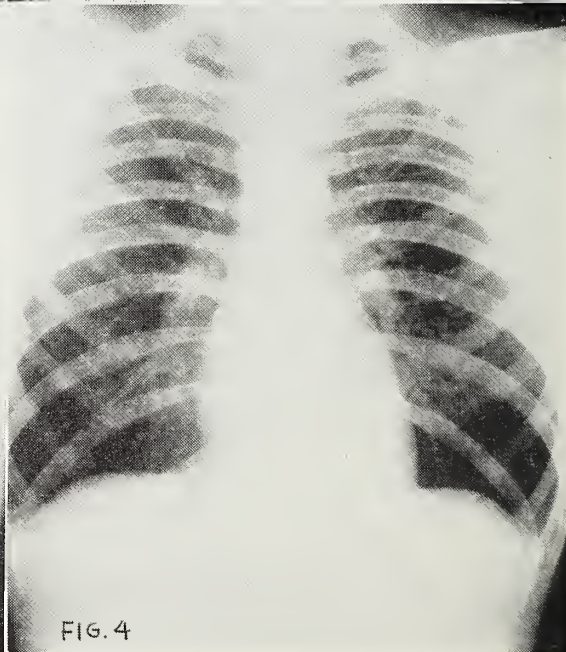
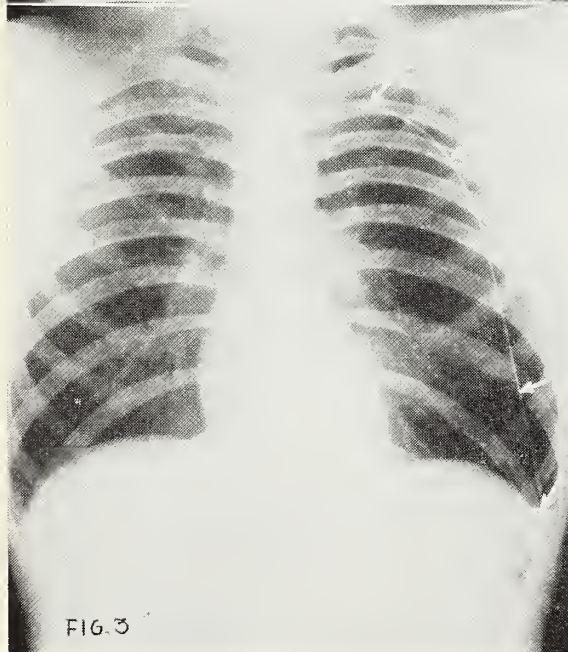
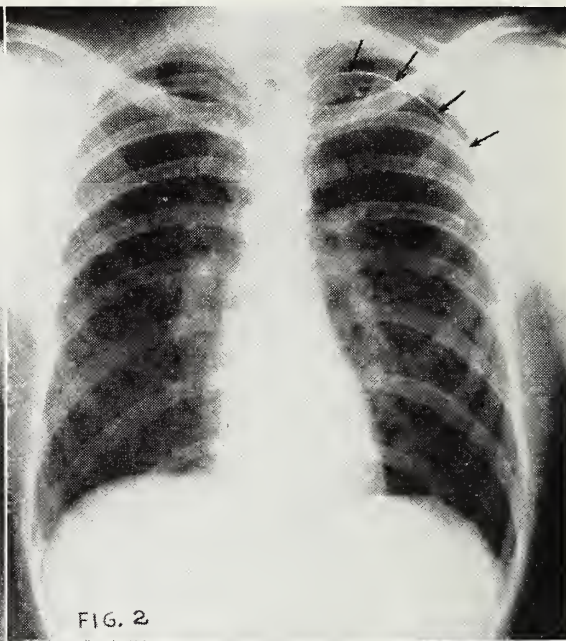
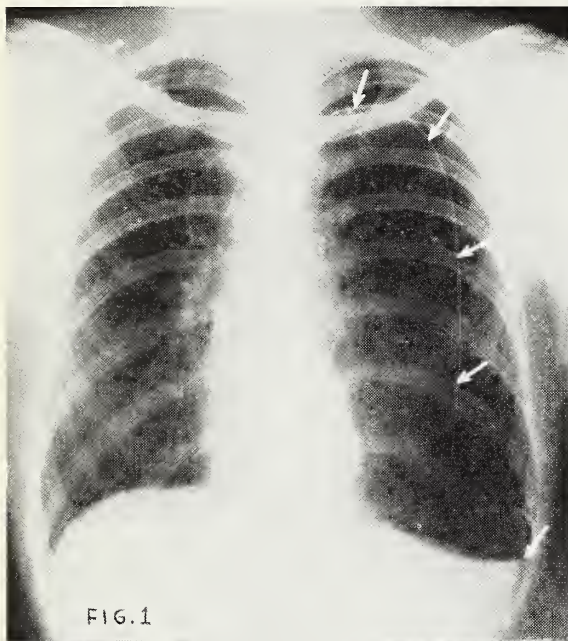
CASE II. W. G., male, age twenty, appeared on November 24, 1939, complaining of dull pain beneath the left scapula which had begun suddenly the evening before following a run of eight to ten blocks. He stated that the pain was more severe on deep inspiration and on walking. Physical examination of the left chest revealed only distant, indistinct breath and voice sounds infra-clavicularly and in the left upper axillary line. Roentgenogram of chest (Fig. 3) revealed a partial collapse of the entire left lung with a zone of pneumothorax from one to two inches wide from apex to base (this type is sometimes referred to as mantle pneumothorax). No intrinsic lung pathology could be visualized. On December 4, 1939, reexamination of the chest demonstrated reexpansion of the left upper lobe but approximately the same degree of collapse of the lower lobe. A small amount of fluid persisted in the left costophrenic angle. On December 18, 1939, the pneumothorax had completely disappeared (Fig. 4), the costophrenic angles and the lung fields were clear. Reexamination on March 4, 1940, demonstrated the continued complete expansion of the left lung and the lung fields were clear. (This patient had a one plus reaction to a Mantoux (P. P. D. No. I) test on September 18, 1937. X-ray examination at that time had shown calcification in each hilum with a Gohn complex near the right base.)

CASE III. E. C. B., male, age nineteen, came in on January 4, 1938, because of transitory pains in left chest and in left shoulder. Occasionally noticed pain on

walking and had a slight cough which was non-productive. The only physical sign was hyperresonance in left axilla. X-ray revealed a partial pneumothorax of the left lung varying from 1.5 inches in width at the apex to 0.5 inches in width near the base. Mantoux test was negative. Reexamination on January 25, 1938, showed complete reexpansion. On February 14, 1938, he had gradual onset of pain in the left chest with symptoms subsiding on February 17, 1938. X-ray demonstrated a recurrent pneumothorax on the left side which was a little larger than that of the previous illness. Another roentgenogram taken on March 17, 1938, revealed com-

plete reexpansion with no intrinsic lung pathology.

CASE IV. H. M., male, age twenty-one, reported September 21, 1937, with a history of sudden onset of pain in left chest the preceding day while walking. Pain radiated to left shoulder and was more intense on deep inspiration. He had no cough or dyspnea. On physical examination there was slight limitation of motion on the left side, there was hyperresonance supra-clavicularly and breath sounds were diminished in the left axilla. Patient had a one plus Mantoux test. X-ray examination of the chest revealed a partial pneumothorax involving the left apex. Patient was symptom free on September 24, 1937, and the



following day a second roentgenogram of the chest was made which showed complete reexpansion with slight calcification in the left hilum.

All of the above four patients were of the same general body build being of the linear type.

SUMMARY

A partial review of the literature concerning cases of spontaneous pneumothorax with particular emphasis on those cases of partial degree has been made along with a report of four cases of partial spontaneous pneumothorax two of which had recurrences.

CONCLUSION

1. Partial spontaneous pneumothorax can be readily overlooked unless roentgenograms of all suspected cases are taken.

2. Since practically all of these cases recover a definite etiological factor is difficult to determine.

3. Symptoms and signs are inconstant although diminished tactile fremitus and breath sounds along with localized hyperresonance are the most constant physical sign.

4. Accurate diagnosis is entirely dependent on x-ray examination.

5. All of our cases and approximately seventy to seventy-five per cent of those reported are in males.

6. Our four cases and sixty-five to seventy-five per cent of those in the literature occurred on the left side.

7. Treatment is symptomatic and should primarily be conservative.

BIBLIOGRAPHY

1. Leggett, E. A., Myers, J. A., and Levine, I.; Spontaneous Pneumothorax, *Amer. Rev. Tuberc.* 29: 348-361, Mar., 1934.
2. Irons, E. E.; Pneumothorax, *Cecil's Text. of Med.*, pps. 937-941, 1935.
3. Blackford, S. D.; Spontaneous Pneumothorax in College Students, *J. A. M. A.* 113:737-739, Aug. 26, 1939.
4. Wilson, J. L.; Spontaneous Pneumothorax, *Internat. Clin.* 1:157-175, Mar., 1937, (cited by Blackford).
5. Hayes, E. W.; Spontaneous Pneumothorax, *Amer. Rev. Tuberc.* 8:297-303, Nov., 1923.
6. Silver, H. B.; Spontaneous Pneumothorax in the Newborn, *Amer. Journal of Dis. of Child.* 57:907-915, Apr., 1939.
7. Gasul and Singer; Spontaneous Pneumothorax in the Newborn, *Amer. Jour. of Dis. of Child.* 45:1050-1055, May, 1933.
8. Weiner, C.; Spontanpneumothorax beim Saugling, *Arch. f. Kinderh.* 91:14, 1930.
9. Donahoe, W. E.; Pneumothorax in a Newborn Infant, *Journal-Lancet*, 52:699-701, Dec. 1, 1932.
10. Hotz, A.; Ueber partiellen spontanpneumothorax beim Neugeborenen, *Schweiz. Mediz. Woch.* 64:209-211 Mar., 1934.
11. Chart, R.; Spontaneous Pneumothorax, *Tuberculosis Abstract* 11: Nov., 1939, *Rev. in Jour. of Kans. Med. Soc.* 41:73-74 Feb., 1940.
12. Miller, J. A.; Pneumothorax *Internal Medicine by Musser*, pps. 794-797, 1936.
13. Boyd, W.; *Textbook of Pathology*, pps. 493-494, 1935.
14. Horine, E. F.; Heart Symptoms Caused by Spontaneous Pneumothorax in persons otherwise Normal, *Southern Med. Jour.* 31:1253-1255, Dec., 1938.
15. Weil, Ourmanský, and Dreyfus; Pneumothorax Partiel Non tuberculeux à Reproductions Successives et à généralization secondaire, *Rev. de la Tuberc.* 4:26-31, Jan., 1938.
16. Vinson, P. P.; Spontaneous Pneumothorax Following Bronchoscopic Aspiration of a Pulmonary Abscess, *Med. Clin. of No. Amer.* 13:1379-1385, May, 1930.
17. Willi, H.; Fruhzeitiger persistierender Spontanpneumothorax in Sauglingsalter, *Schweiz. Mediz. Woch.* 64:229-233, Mar., 1934.
18. Deglos, M.; Pneumothorax partiel a debut insidieux, fixe depuis 5 ans chez en enfant de 12 ans ½, *Bull. de la Soc. de Pédiatrie de Paris* 9:623-627, Dec. 1935.
19. Glaser and Landau, Pneumothorax of the New-Born, *Amer. Jour. of Dis. of Children* 50:986-997, Oct., 1935.

THE MEDICAL MANAGEMENT OF URINARY INFECTION IN PREGNANCY

O. W. Davidson, M.D.

Kansas City, Kansas

Considering the frequency with which deviations from normal are found in the urine of pregnant women, it is surprising how seldom complications appear that require urological intervention. Nevertheless, urologists are interested in this problem as it relates to the most common lesion of the genito-urinary tract, namely pyelonephritis. In fact, next to respiratory infection, pyelonephritis is probably more common than infection in any other field.

Before going further, we should have a clear understanding of the term pyelonephritis. Pyelonephritis, or pyelitis as it is commonly referred to, is generally recognized as a lesion predominating in the central portion of the kidney. The path of infection usually ascends, by way of the ureters and lymphatics, from the lower urinary tract and the pelvis.

There are two major forms of pyelonephritis, the complicated and the uncomplicated. Of these there are three clinical phases to consider, namely; the acute, the recurring, and the chronic form.

Acute pyelonephritis occurs quite frequently in the female, due to the susceptibility of the urinary tract to ascending infection. There is little doubt that the infecting organisms in the female ascends through the urethra much more frequently than is generally recognized. Most cases of acute pyelonephritis are of short duration and are self limiting. Natural resistance is sufficient in many instances to overcome the infection. However, if the infection persists longer than four or five days, accompanied by fever and chills, nature should be aided by administration of any of the various chemotherapeutic preparations that have proven beneficial in such cases.

Recurring pyelonephritis is characterized by repeated attacks of acute pyelonephritis. The periods of infection may last over several weeks or months and recur after a variable lapse of time. Although the patient may be free of symptoms during such intervals, careful examination of the urine will often show the presence of bacteria, indicating that the kidney infection is dormant rather than eliminated.

The third form or the chronic pyelonephritis is the most difficult to overcome of the three. Pyelonephritis is usually classed as chronic if the infection persists over a period of a year in spite of treatment.

Unless complications occur with this type, patients usually suffer only from frequency and painful urination and in many cases become accustomed to it. In countless cases such complaints of the irritable bladder will be associated with the chronic form of pyelonephritis.

What has been said concerning the prevalence of bacteria and urinary infection in the female makes it doubly important that we consider this condition in case of pregnancy where so many other factors develop that favor ascending infection. In pregnancy there are variable changes in the resistance of body tissues to infection. At an early stage of gestation, in practically every case of pregnancy, there is loss of tone with dilation and tortuosity of the ureter which may disturb peristalsis and promote stagnation of urinary elimination. And too, intrapelvic pressure and circulatory changes in the pelvis may favor the ascension of infection by way of the ureters and lymphatics.

Since objective changes are present that favor the spread of infection, at such an early stage, in the urinary tract of practically every case of pregnancy, and with a realization of the potential dangers that attend such infections, it would appear that we should place more emphasis upon the control of bacteria in the urine to prevent the development of complications.

In view of the fact that the success of therapy in these cases is dependent upon an early recognition of the infection and application of sound therapeutic measures, we should pause to consider the revolutionary advances that have taken place in the field of chemotherapy during the past few years. It would appear that necessity has made bacteriologists out of those who attend confinement cases. Or, stated more accurately perhaps, such advancements have opened a new field of urological bacteriology. If there is any on thing that has been learned in the development of modern therapy of urinary infection, it is the necessity of a working knowledge of bacteriology.

For general purposes, however, it is necessary to be familiar with only a few simple observations in bacteriology. The two main types of bacteria can be recognized easily without elaborate laboratory facilities. For practical purposes the simple methylene blue or grams iodine stain of the dried urinary sediment may be sufficient. Microscopic examination will readily determine the presence of cocci or bacilli and likewise whether they are gram negative or gram positive.

Although gram negative bacilli are most commonly observed in cases of pyelonephritis, any type of bacteria may be present and in many cases the

bacteria are mixed. When it is desirable to make further identification of the various bacteria, culture studies may be made from the urinary sediment. Of the bacilli group, the three which occur most frequently and have the greatest clinical significance are the colon bacillus, the bacillus aerogenes, and the bacillus proteus. It is highly desirable to distinguish the proteus bacillus because it splits urea, causes alkaline urine, and is often very hard to eliminate. Of the cocci group, gram positive cocci are the most frequent. Staphylo-cocci are seen more frequently than streptococci.

It should be remembered, in cases that have been under treatment, the disappearance of symptoms and absence of pus in the urine, does not mean that the infection has been completely eliminated. The persistence of gram positive or gram negative bacteria, even though the patient is symptom free and the urine is free of pus, may point to a return engagement of the infection. Treatment in these cases therefore, should be continued not only until symptoms disappear, but until after the urine has been free of bacteria for several days.

Although the management of pyelonephritis is relatively simple in a vast majority of instances it may be quite complex in some cases. This is due perhaps to the fact that we have not found, as yet, a specific urinary antiseptic for every form of infection. Certain drugs nevertheless have been perfected that merit consideration.

Before entering upon a brief discussion of some of the more popular therapeutic preparations, it may not be amiss to mention the bacterio-static effect that occurs with alkalization of the urine to a PH of 8.5, or an acidification of 4.5. Deleterious effects are commonly encountered, however, if such degree of alkalinity or acidity is maintained for a long period of time. In this connection also, ketogenic diets although seldom tolerated in these cases, produce ketosis with acidification which gives the effect of an organic acis, which effect often is of benefit in controlling bacterial infection.

Considerable emphasis has been placed on the desirability of concentrating the urinary antiseptics used in the urinary tract. In order to accomplish this, fluids are restricted quite materially for a few days. Personally, I favor an increase in the water balance of the body, to stimulate activity on the part of the sluggish and inactive kidney units, and a commensurate increase in the dose of the drug administered.

Until recently treatment of coccal infection in the urinary tract has not been nearly as efficient as directed toward the control of bacillary infection. Up to the time that sulfanilamide was introduced as a urinary antiseptic, neoarsphenamine was about

the only effective anti-coccal remedy. In my experience neoarsphenamine in doses of from 0.2 to 0.3 gms. at four to six day intervals has proven beneficial in a number of instances of coccal infection. Acidification of the urine seems to improve the results. Neoarsphenamine is not continued beyond a third injection unless improvement is evident.

In connection with bacillary infection a word should be said about the various azo dye preparations. They have had wide usage on the basis that the colon bacillus is the chief bacterial organism in the urine of pregnant women. As in the case of neoarsphenamine for coccal infection, the azo dye preparations have proven highly beneficial in certain instances of bacillary infection, although they have been equally disappointing in others.

It is impossible for such a discussion as this to give adequate consideration to the two therapeutic agents that have had such wide usage during the last four or five years, namely, mandelic acid and sulfanilamide. It will be possible only to refer to some of their more important qualities.

Mandelic acid has proven highly effective in the treatment of certain bacillary infection. It is particularly bactericidal against one member of the cocci group, namely the streptococcus faecalis. The use of mandelic acid is limited, however, even for these organisms, by reason of the fact that the urine must be highly acid. This in itself is often either objectionable or impossible to attain. In some cases mandelic acid may eliminate bacteria from the urine, when sulfanilamide or other preparations fail to do so.

Sulfanilamide has proven to be a most valuable drug in the treatment of urinary infection. It is particularly efficacious against colon bacilli and the proteus bacillus group which has been extremely difficult to eradicate. Although sulfanilamide in any of its various forms is not as efficacious against bacillary infection, more often than not it will eliminate them. It is almost entirely impotent against one member of the cocci group, namely streptococcus faecalis for which it is necessary to fall back on mandelic acid therapy.

Even though a vast majority of the urinary infections of pregnancy are amenable to medical treatment, if an antiseptic cannot be administered orally, it naturally has a limited field of usefulness. Its effect when given hypodermically is not prolonged sufficiently to assure more than temporary or symptomatic alleviation. Such medication is therefore practical as a rule only for hospital patients or those who can be seen frequently. In some instances an individual may tolerate one drug as regards the gastro tract, and be unable to take another. Since

both kidneys are likely to be irritable, it is dangerous to continue the use of some of the more effective urinary antiseptics, if the urine shows significant increase of albumin, casts, and blood.

The toxicity of sulfanilamide is a thing to be reckoned with in these cases, although this is not such a problem since greater refinements have been made with this drug, and since we have come to realize that large doses are not necessary in many instances of urinary infection. From forty to fifty grains daily is a sufficiently large dose to control many of the acute infections, and as little as five to fifteen grains daily may be enough to control the chronic case or prevent the recurrence of an acute pyelonephritis.

As mentioned before, infecting organisms gain entrance to the bladder through the urethra in the female, much more frequently than is generally recognized. Hundley and his associates contend that a vast majority of the organisms found in the urine of pregnant women are normal inhabitants of the labial epidermis and mucosa of the vagina. Countless women who complain of urinary frequency and irritable conditions of the bladder will be found to have evidence of infection in the urethra.

Since pyelonephritis is usually secondary to infection in the lower urinary tract and pelvis, treatment must be directed to this source. The treatment in many instances should start with the elimination of vaginal infection, chronic cervicitis and infection in the periurethral tissues. Urethritis in the female lends itself readily to dilations and injections of mild antiseptic solutions such as argyrol, neosilvol, or weak silver nitrate.

It is essential to make differential bacterial studies for the reason that, some bacteria respond more readily to certain drugs than others. A simple methylene blue stain will serve to differentiate cocci from bacilli. The grams iodine stain can be used to identify the gram positive or gram negative organisms, and culture studies should be relied upon to determine more specific characteristics of the bacteria.

Elimination of pus from the urine and cessation of symptoms does not necessarily indicate a cure. To insure against recurrence, treatment should be continued well past the disappearance of bacteria.

Every effort should be made to stimulate and maintain normal renal function, and the maintenance of a physiological equilibrium of urinary elimination, by careful observance of the water balance of the system.

In order to attain therapeutic success the chemotherapeutic agent must be selected with precision
(Continued on Page 522)

President's Page

To the Members of The Kansas Medical Society:

Despite all imperfections, dissatisfactions and disappointments, American medicine in general and Kansas medicine in particular have much to be thankful for at this festive season of the year, so much, in fact that it would seem as though some acknowledgment of our gratitude is in order.

To continue to serve the known medical needs of Kansas people in an efficient and economical manner and take an active and constructive interest in all civic affairs which directly contribute to the betterment of community life, is just one of the many ways by which we can as a profession express our gratitude for our opportunities.

Merry Christmas and may the new year be the best year Kansas medicine has ever experienced.

Sincerely,

Loren L. Loveland M.D.

President, The Kansas Medical Society.

EDITORIAL

OSTEOPATHY

To anyone familiar with the situation, one of the most amazing things about osteopathy is the confusion which exists among the members of that group concerning the nature and scope of its so-called therapy.

For example, in recent years osteopaths have consistently made irreconcilable and extensively varying claims concerning the practice of osteopathy. In certain parts of the country they have held firm to their anti-drug manipulation theory; in other places they have represented that osteopathy is manipulation with the addition of some drugs, and in still others, as has been true in Kansas, they have loudly told the legislatures, the courts, and the public that the alleged science of osteopathy has never changed, that it has always included all drug therapy and the performance of operative surgery, and that osteopaths now believe, and have always believed in the same procedures and methods practiced by the medical profession.

Those who are acquainted with the history of osteopathy know that the claims pertaining to drug therapy and surgery, do not coincide and cannot be reconciled with the statements of the founder of osteopathy and with those contained in osteopathic literature down thru the years the "discovery" of osteopathy has existed.

An interesting illustration of this fact is contained in an article entitled "The Application of the Principles of Osteopathy" which was published in the November, 1940, issue of the Forum of Osteopathy and which was written by a prominent osteopath who has been the Secretary of the National Medical Board of Examiners for Osteopathic Physicians, a recent President of the American Osteopathic Association, and an official in the legislative programs of that organization. The article contains the following statements:

"You have had it outlined to you here that osteopathy is based fundamentally upon the concept that the body has within it the fluids and forces necessary to protect it from disease processes, and that structural integrity is a requisite for the maximum efficiency of its inherent protective processes.

To apply the principles of osteopathy is primarily to adjust structural irregularities and to normalize functional activity through manual manipulation.

Application of the principles of osteopathy requires:

1. A knowledge of the normal relations of the body structures in a natural standing position and, especially important, the normal relations of the joints, particularly the spinal joints, and adjacent tissues.

2. A knowledge of the normal feel of tissues.

Under the second head you develop a knowledge of the feel

- (a) Of tissue in a recent osteopathic lesion as distinguished from that in a chronic lesion.
- (b) Of tissues where there is general infection.
- (c) Of local skin temperature variations.
- (d) Of lack of tone.
- (e) Of spasticity.
- (f) Of fibroid tissue formation.
- (g) Of ossification between joints.

3. A knowledge of the normal variation of relations in various naturally assumed positions, especially the normal range of joints.

4. A knowledge of the effect upon the joint and supporting tissue of motion which forces the joint in given ways beyond its natural range of motion.

5. A knowledge of where in the joint are the adhesive restrictions or positional impediments which limit the motion in a given manner after the joint has been injured.

6. A knowledge of the adherence of the articular surfaces of joints through the principle of suction.

7. A knowledge of how much force to apply under varying tissue conditions and with different individuals; the best use of force to break adhesions, to facilitate joint circulation and absorb tissue thickening and the products of inflammation, to align structure and normalize motion.

8. A knowledge of the mechanics of body balances; how parts are thrown off balance by lesions and conditions sometimes distant from them.

9. A knowledge of the physiology of the tissues and organs supplied by nerves from each segment and region of the spine.

10. A knowledge of reflexes, with especial consideration to the bearing of osteopathic joint lesions upon them.

11. A conviction that the human body is endowed by the Creator with inherent self-protection and recuperative agencies which are cardinal factors in the maintenance of health and recovery from disease and injury, and that manual manipulative procedures to remove the impediments of structural irregularities, and to activate these natural agencies, constitute the most effective therapy. . . .

You will recall an oft-mentioned incident of Dr. Still's boyhood life. He used to have congestive headaches. One day when he had one he lay down with his head in the swing rope and found later that it had stopped his headache. Thereafter he "roped his neck" when he had a headache.

It was not alone direct pressure on the tissues caused by the rope that got the results, but the upper

cervical and occipito-atlantal articulations were sprung apart, aiding in freeing the circulation of fluids and releasing nerve-irritating tissue tension there. And when you hold the back of the neck to relieve headache, as is often done, you'll always get better results if it is done in a manner to spring the vertebrae apart rather than just pressing on the tissues.

In Dr. Still's 'Autobiography,' Chapter 9, he tells of his first case of bloody flux, and how he pressed along the child's spine on the rigid places. When he pressed, in addition to the relaxation of the tissues by the pressure, he was gently springing the intervertebral and costovertebral joints. He used to tell us when we had summer complaint to lie backwards over a barrel with the pressure where it felt tender. It works—and again the articulations are sprung.

The same is true when treating a pneumonia patient who is quite weak and not to be disturbed. You put your hands under him as he lies on his back and exert gentle but firm pressure between the upper thoracic transverse processes at points of palpable tension. You not only relax deep contractures through the inhibition of direct pressure, but you, too, spring the articulations with the added benefit indicated. . . .

Every since we have been a profession it has been a constant fight to convince many in our own ranks that we have something better than the other fellow in therapy. We fall for this or that newly evolved and currently ballyhooed professional panacea. To the extent that we do that we neglect the development and best utilization of our own vastly more efficient therapy.

Dr. Still said: 'Whenever a drug goes in some osteopathy goes out.' True, isn't it?

The most recent panacea which seems to have hypnotized some in our ranks is sulfanilamide and its pharmaceutical cousins. . . .

(It would be interesting, however, to follow up and see how many later die or have injured health from the vicious effects of this powerful systemic poison upon the body tissues, and the final chapter of the story cannot be written until that is done.) . . .

You will not most successfully apply the principles of osteopathy by merely tacking certain manipulative procedures to a general medical education. At times there has been an attempt to solve our educational problems that way.

Osteopathy is built upon a process of reasoning.

Only by indicating from day to day in the classrooms of every subject taught in an osteopathic college, the practical applicability of what is being taught to osteopathic procedure, will the maximum results be achieved in starting out practitioners as osteopathic reasoners, those who will best apply the principles of osteopathy.

Certainly every teacher in an osteopathic college should have a clear cut conception of the principles upon which our practice is based and should be sold on osteopathy.

Dr. Still's greatest concern was to make us think osteopathically, reason osteopathically.

You cannot think the body has within it its own drug store, as Dr. Still expressed it, effectively apply

osteopathic reasoning to the end of giving the recuperative power of the body their biggest chance, and at the same time think that the poisons of sulfanilamide and sulfapyridine put into the system will benevolently eliminate mankind's infective ills.

You get mixed pickle ideas instead of definite, positive ones along a given line of reasoning.

You cannot do it successfully any more than you can have a democratic and a totalitarian form of government running at the same time in the same country."

Seemingly any scientific person would agree that there is no place for the use of remedial drugs in principles of the kind above expressed. If it be reasoned, as osteopaths have always argued, that the body is a machine, that the body has within itself all of its needs, that foreign substances introduced are completely detrimental, that sickness and disability do not result unless parts of the body become maladjusted, and that adjustment and stimulation are thereby the way for cure, it is impossible to see how the osteopaths can maintain that there is even a single place in their armamentarium where they can consistently administer a drug or drugs for curative purposes.

It is also impossible to reconcile therapeutic surgical procedures by an osteopath when one applies the above theory to its logical conclusion and when comparison is made with the unequivocal statements of the founder and other teachers of osteopathy concerning the application of the manipulative theory to those cases which are commonly considered to be surgical by the medical profession.

It may be that the word confusion is not correctly descriptive of the situation in which the osteopaths find themselves involved. Perhaps it is more accurate to say that osteopaths in practice have found that the osteopathic theory will not work, that the principles of medicine and surgery, which they have so strenuously opposed, do work, and that they feel it is better to forget their own theory than to merely go out of business. Two things, however, are clear and definite in this regard. Osteopathy through the gradual abandonment of its own alleged distinctive therapy is proceeding into the slow, lingering death that has been experienced by numerous other cults which claimed to have something new and different. Likewise, that osteopathy can never hope to call itself a profession when it merely apes in second rate manner the work and beliefs of a profession.

SULFATHIAZOLE, A NEW THERAPEUTIC AGENT*

Since the introduction of sulfanilamide in the treatment of infections, there has been a great impetus to the study of other derivatives of this compound. The most recent contribution is sulfathiazole, which is the thiazole analogue of sulfapyridine. Sulfathiazole was synthesized by Fosbinder and Walter, and by Lott and Bergeim in 1939.

In contrast with sulfapyridine, the drug sulfathiazole is more readily absorbed and is more rapidly excreted, and considerably less is conjugated. Likewise, sulfathiazole is much less toxic, causing vomiting in only about ten per cent of the cases, which is one of the disadvantages of sulfapyridine. However, recrystallization of the drug in the renal tubules may produce serious renal complications, although these are usually transitory. No particular effect upon the hemopoietic system has been noted. Dermatitis is a relatively common toxic effect, and peripheral neuritis has been reported.

Clinical application of this new chemotherapeutic agent indicates that it is most efficacious in the treatment of staphylococcus septicemia. Spink and Hansen¹ report the successful treatment of fifteen consecutive patients with staphylococcus septicemia with sulfathiazole. Spink and Paine² report considerable success with the use of sulfathiazole crystals in localized staphylococcus lesions, such as carbuncles and abscesses. Urinary tract infections due to staphylococci and to *Streptococcus faecalis*³ and ⁴ respond to sulfathiazole, whereas sulfapyridine and sulfanilamide fail to sterilize the urine. In the treatment of pneumonia, results with sulfathiazole are quite comparable to results with sulfapyridine. However, the effect is not as dramatic, although the toxic effects are less.

The recommended dosage of sulfathiazole for adults and older children consists of an initial dose of two to four grams, and one gram every four hours thereafter until the temperature has remained normal for forty-eight hours. The dosage is then gradually reduced and discontinued on the fifth to seventh day. For infants and children, .25 of a gram per kilo-

gram of body weight is given in divided doses until the temperature is normal; then the dose is gradually decreased and the drug is discontinued on the fifth to seventh day. The sodium salt of sulfathiazole may be given intravenously in a five per cent solution of distilled water, and initial dose of three grams, and one gram every eight hours. To control the dosage requirements and to prevent serious toxic manifestations, daily estimations of free sulfathiazole should be made. Concentrations of from three to six milligrams per cent of the free form of the drug are considered adequate. Determinations of sulfathiazole in the spinal fluid indicate that very little of the drug enters the subarachnoid space; therefore, in cases of pneumococcus meningitis, sulfapyridine is the drug of choice.

From the available laboratory and clinical data it may be concluded that sulfathiazole is the most effective therapeutic agent in the treatment of severe staphylococcal infec-

tions. In the treatment of pneumonia it is of about the same value as sulfapyridine, although somewhat less toxic than the latter drug. In certain types of urinary tract infections, it is more efficacious than either sulfanilamide or sulfapyridine.

REFERENCES

1. Spink, W. W., and Hansen, A. E.: Sulfathiazole; clinical evaluation. *Jour. Am. Med. Assn.*, cv:840-847 (September 7) 1940.
2. Spink, W. W., and Paine, J. R.: The local use of sulfathiazole in the treatment of staphylococcal infections. *Minnesota Med.*, xxiii:615-620 (September) 1940.
3. Helmholtz, H. F.: The bactericidal effect of sulfathiazole and sulfamethylthiazole in bacteria found in urinary infections. *Proc. Staff Meet., Mayo Clin.*, xv:113-116 (February 21) 1940.
4. Pool, T. L., and Cook, E. N.: Sulfathiazole and sulfamethylthiazole in the treatment of infections of the urinary tract. *Proc. Staff Meet., Mayo Clin.*, xv:113-116 (February 21) 1940—October, 1940, *Journal of Iowa Medical Society*.

*From the *Journal of the Iowa Medical Society*—October, 1940.

CANCER CONTROL

MALIGNANT KIDNEY TUMORS

Arthur D. Gray, M.D.

Topeka, Kansas

Primary neoplasms of the upper urinary tract fall into three general classifications: First, growths arising in the kidney proper. This group is particularly hard to differentiate or classify. Adeno-car-

cinoma and alveolar carcinoma are perhaps the commonest forms in adults although frequently it is extremely difficult to differentiate between these and adenoma or hypernephroma. Second, those tumors of the renal pelvis which are rather similar pathologically to tumors of the bladder, and third, those of the ureter. Primary neoplasms of the ureter are so unusual they can demand little space in this brochure. Malignant papilloma, carcinoma, squamous-cell epithelioma and sarcoma have been reported but are extremely rare.

It may probably be said without fear of contradiction that the most common malignant tumor of adult life is hypernephroma. The theory that the histogenesis of this growth is the incorporation in the fetal kidney of particles of adrenal tissue has been attacked by numerous observers, and as Young points out, many competent pathologists have described them as sarcoma, angiosarcoma, endothelioma and carcinoma. The problem is fortunately simplified by the fact that whether we are dealing with a true hypernephroma or carcinoma, sarcoma, or any other malignant tumor of the kidney, the symptoms are much the same, the diagnosis based on the same principles and the treatment identical.

The vitally important thing in the diagnosis of all malignant tumors of the kidney is an early recognition of the pathology present, and yet in this very necessity we meet with an extremely difficult problem in that early clinical manifestations are either very rare or absent, and there are no definite indications of early precancerous change.

The cardinal symptoms of renal tumors in hematuria. The blood may be present in quantity or only evident thru microscopic study. If the bleeding is free, clots may form in the bladder, while small worm-like clots from the ureter suggest the renal origin of the blood. A mild form of hematuria, varying from time to time in degree and with the absence of any other symptoms, thru its apparent insignificance, may blind both the patient and his physician to the presence of a grave pathological condition until so much time has passed that the prognosis is bad.

Pain is not a constant symptom of renal tumor. There may be attacks of classical renal colic from clots forming in the kidney pelvis or ureter, or perhaps a dull pain in the kidney region bearing no particular relation to the periods of bleeding. The absence of pain is not a dependable factor in diagnosis since many cases go on to complete involvement of the kidney and hopeless metastasis without the patient having suffered any pain whatever.

The presence of a palpable tumor is of obvious importance but it should be born in mind that many malignant kidneys are not markedly increased in

size. A malignant kidney that can be palpated is usually an advanced condition.

Pressure symptoms resulting from the tumor obstructing the veins or lymph channels may result in varicocele on the same side as the tumor or oedema of the legs if the vena cava is compressed. Loss of weight and strength is not usually present until an advanced stage of the disease is reached. This is also true of metastatic symptoms which once accurately demonstrated contraindicate surgical treatment of the original kidney condition.

The diagnosis of renal tumors demands a painstaking urological study. Definite location of the origin of the bleeding, a check on the renal function of the afflicted side, and a retrograde pyelogram are usually conclusive. A simple x-ray film may bring out a suspicious kidney outline or intravenous visualization demonstrate the fairly classical distortion of the kidney pelvis and calices, but should never be taken as diagnostic proof of renal neoplasm alone. When intravenous urography was introduced, the method was hailed as an important diagnostic procedure which would be of great benefit in early diagnosis. In practice it has proved disappointing since it is not only subject to much error but has become almost too available with the result that films have been misinterpreted by the well-meaning general practitioner, and have perhaps encouraged him to procrastinate to a dangerous degree before securing competent urological consultation.

The treatment of malignant tumors of the kidney is surgical, at the earliest possible time that diagnosis can be made. Since there is a marked tendency for the tumor to involve the renal vessels, the pedicle should be divided as far from the kidney as possible. Because of the great frequency of metastasis the use of massive doses of x-ray in the form of high voltage deep therapy should be seriously considered in all cases.

MEDICAL ECONOMICS

INDUSTRIAL MEDICAL MOBILIZATION

H. M. Glover, M.D.

Newton, Kansas

Committees on industrial health in state and county medical associations will play an important part in medical preparedness. Much of the planning is still in formative stages. This paper will attempt to point out in what directions the committees may be called upon for specific industrial health assignments.

In war time the medical needs of the country must be adjusted to take care of:

- a. The civilian population.
- b. The workers in essential war industries.
- c. The armed forces.

It is agreed that as war is waged these days loss of working time by skilled and indispensable workers must be classed as war-time casualties which require mobilization of medical resources for competent handling to as great a degree as those which occur in the combat forces. The medical profession is on a whole better equipped to perform a competent task than it was twenty-five years ago. New occupational hazards have been studied and we have improved control over old ones. Industrial medical departments have been established in many industries, and the medical profession is better organized in this specialty than twenty-five years ago.

Chief responsibility for the health of workers in war time industry will fall to the United States Public Health Service under Dr. Paul Neal. Some of the activities to be carried out by the personnel of bureaus of industrial hygiene in health departments will deal with the following subjects:

1. The location of new plants and advice on construction and renovation of plants in the interest of safety and health.
2. Investigation and control of specific industrial hazards.
3. Study of fatigue in relation to the defense program.
4. Absorption of handicapped persons in industry.
5. Survey of present health service facilities in industry.
6. Program for physical examination and medical services by industry.
7. Classification and training of additional personnel.
8. Classification of educational institutions for the training of personnel and existing laboratories which could investigate hazardous materials to be employed in defense industry.
9. The preparation and dissemination of information on various toxic materials and processes for the practical protection of the health of workers.
10. The promotion of measures for the control of syphilis, tuberculosis, and other communicable diseases among industrial workers.

The Committee on Medical Preparedness of the American Medical Association is working to determine present resources for adequate medical supervision of industrial workers. It is made up of members from each of the army corps areas and works in close cooperation with the Surgeons General of the army and navy medical corps and the Surgeon General of the United States Public Health Service.

Similar committees have been appointed by the various state medical associations and will be organized in all county societies to cooperate.

The Council on Industrial Health will work in close cooperation with the Committee on Medical Preparedness of the American Medical Association. At its recent meeting, it was decided that the Council could be most helpful to the Committee on Medical Preparedness in the American Medical Association by vigorously supporting the following program.

1. To identify all physicians now qualified to perform various aspects of industrial medical service. It is estimated that five thousand physicians who have had some participation in industrial medical activity will be available immediately.
2. To inquire of each industrial physician whose name is derived from this census of physicians, his qualifications and experience and the nature of the industrial medical facilities at his command. A questionnaire will be sent out securing this information.
3. To acquire and publish information on the nature, location, and control of dangerous industrial health exposures.
4. To improve and augment the organization of cooperating committees on industrial health in the state and county medical societies, and to develop a program of field activity to the end that:
 - a. Agencies can readily be formed in industrial areas with knowledge and authority to determine where industrial medical service is needed and to arrange that the service be supplied.
 - b. Proper coordination exist between all independent agencies having an interest in industrial health, notably physicians in general and special practice, nurses, hygienists, and other technical experts.
 - c. Proper correlation exist of all activities bearing on the problem of industrial physical examinations.
5. To assist in the development of intensive training courses in industrial health methods.
6. To insist that an assignment in industrial practice be regarded as equal in importance and dignity to a medical assignment with the combat forces.

It is urged that the committees on industrial health in the state medical societies should give prompt consideration to the steps which they can take to be most useful to committees on medical preparedness in their own state societies. The following steps are recommended:

1. Establish working relationships with the committee on medical preparedness in your own state medical association. Let that agency know of your existence and present status of your program.
2. Improve or augment committee personnel so that when the demand comes your committee can be depended upon to establish or assist in the establishment of agencies in industrial areas with knowledge and authority to determine where industrial medical services are needed and to arrange that the service be supplied. It is urged that the state committees include representation from:
 - a. Private practice.
 - b. Full-time industrial work.
 - c. Medical representation.
3. Smooth correlation requires that your committee be fully aware of the industrial health program of the bureau of industrial hygiene in your state health or labor department and that the bureau be well informed of your own plans.
4. Establish working relationships with state and local societies of industrial physicians and surgeons. It is from this group of men that talent must be drawn for competent service early as well as teachers who can train other physicians to do a competent job in industrial practice.
5. Establish working relationships with state or local organizations of industrial hygiene engineers, safety engineers and industrial nurses.
6. Extend your own industrial health program into the county medical societies wherever the concentration of industrial activity warrants it.
7. An industrial health program should be a continuous one if any appreciable effect on industrial health standards is to take place. The presentation of a report to the medical society at its annual meeting is not sufficient. Keep the officers of your society informed as to your activities and cultivate their interest and support.

Catastrophe Units have recently been organized in New York City as a manifestation of practical preparedness to function promptly and efficiently in event of major disasters. These units, consisting of doctors and nurses on the staffs of four municipal hospitals, are located at Bellevue, Queen's General, Kings County, and Morrisania Hospitals. The Bellevue Unit has been called out on four occasions to care for the victims of a large explosion, to render service to refugees on the S.S. Harding, to a major accident in a theatre and to the recent accident in the Grand Central Railroad Station.—Hospitals, August, 1940.

TUBERCULOSIS CONTROL

INCIDENCE OF TUBERCULOSIS AMONG UNIVERSITY STUDENTS*

Erik Hedvall, M.D.

Pulmonary tuberculosis is characterized by an insidious protracted course and a prolonged absence of clinical symptoms. When such symptoms finally appear, the lung changes have frequently spread extensively in one or both lungs. It is essential, therefore, that pulmonary tuberculosis should, if possible, be diagnosed before the appearance of morbid symptoms.

EXAMINATION PROCEDURE

On registration all students are required to come to the Student's Tuberculosis Bureau for an examination. On the first a careful history is taken, a tuberculin test by the Pirquet method and a sedimentation test are made, together with a fluoroscopic and radiographic examination. If the tuberculin test is negative, the students are retested by the Mantoux method with from 0.1 up to one. mg. tuberculin. Only those who do not react to the one mg. dosage are considered negative.

A re-examination of all students is made at least once a year following the same procedure of the original examination, with the exception of the x-ray examination and this is done every third year. However, an x-ray is taken when the previous history, rate of sedimentation or fluoroscopic examination indicates something suspicious or when greater caution is necessary for some other reason. When the tuberculin reaction changes from negative to positive an x-ray is taken every third month during the first year after the primary infection and every six months during the second year, even if no changes have been demonstrated. On the other hand, if any changes are observed they are followed by means of x-rays at intervals of a few weeks or months, irrespective of expense.

Altogether 3,336 persons were examined; 638 were medical students, 1,367 philosophy students, 409 theology students, 488 law students. To these were added 434 probationary nurses at the South Sweden School for Nurses. They were included in order to obtain a comparison with the medical students since both these groups are undoubtedly exposed to a certain risk of tuberculous infection.

RESULTS OF SURVEY

Among those examined, 133, or approximately four per cent, were found to have active tuberculosis. Of the 133 cases, (a) forty-seven were tuberculin-negative and had normal lung x-rays when entering the University or School for Nurses; (b) forty-three had been infected at some period of their lives, since they were tuberculin-positive on first examination but were radiologically sound and (c) the remaining forty-three were tuberculin-positive and did not show a normal x-ray picture of the lungs on first examination. Some of these already had tuberculosis but others did not develop it until later.

In general, the tuberculous changes were progressive and significant. Of the forty-seven who showed no evidence of tuberculosis on entrance, there developed fourteen cases of pulmonary tuberculosis as well as cases of erythema nodosum, exudative pleurisy, tuberculous peritonitis, and miliary tuberculosis with two deaths.

Of the forty-three in the second group who were tuberculin-positive but radiologically sound on first examination, thirty-seven developed pulmonary tuberculosis, two tuberculosis of the hilar lymph nodes, and four pleurisy. One of the cases of pleurisy developed pulmonary tuberculosis as a complication and died.

Of the 133 cases of tuberculosis found in the period from 1930 to the end of the 1937 Spring term, 110 were among the University students and twenty-three among the nurses. Ninety-five students and fifteen nurses are at present fit for work. Of the other cases, nine have died, five are unfit for work and nine are still at the sanatorium.

It is of interest, however, not only to know the number of cases found and how they developed, but also the frequency of the disease in the different groups, as shown in the table:

	No. of Persons Examined	No. of Cases of Tuberc. Found	Percentage
Medical students	638	72	11.3
Philosophy students	1,367	17	1.2
Theology students	409	12	2.9
Law students	488	9	1.8
Nurses	434	23	5.3

These figures indicate that both medical students and probationary nurses are exposed to a considerable risk of tuberculous infection.

MEDICAL STUDENT INCIDENCE STUDIED

During the first year, no case of tuberculosis was found among the medical students. In the second year four cases were detected and during the third to fifth year ten cases each year. From the sixth to the ninth year only six, four, two and one cases

respectively were diagnosed. Thus, most of the tuberculous cases were discovered during the third to fifth year of study, a period which coincides with the last course before and the first courses after the beginning of the practical training at the hospital. Since the medical students live under practically the same conditions as other students at the University, the high tuberculosis morbidity among them must be due to a risk of infection to which they alone are exposed.

Quite a number of the medical students are primarily infected before they begin their hospital training course and, therefore, some course taken before this training must be significant. The medical students themselves have for a long time suspected that the course in general pathology taken before the hospital duty, and lasting one year, constitutes a danger of tuberculous infection. In at least sixteen cases, there is a significant connection between the course of general pathology and the appearance of the primary infection. In the other cases the primary infection occurred either before or after the pathological course, during the training at the hospital.

The infection acquired during the course in pathology may have originated from fellow-students or physicians. The probability of this happening was, however, carefully excluded. For this reason, thorough and repeated examinations of the autopsy rooms were made for the presence of tubercle bacilli. Samples were taken from towels, trays, dust on the autopsy tables and in the rooms and it was found that in spite of all precautions during the post-mortem examinations, tubercle bacilli were discovered when an examination was made twenty-four hours after a necropsy examination of a person with pulmonary tuberculosis. In addition to guinea pig inoculations, suitable cultural experiments were made to obtain a quantitative idea of the presence of tubercle bacilli on the objects and in the rooms examined.

As a result of these examinations, more stringent precautions in disinfecting the autopsy rooms were taken and finally it was agreed, at least for the present, to limit the necropsy examinations to tuberculous patients as much as possible. The results of the latter step are as yet available only for two terms. Nevertheless, examinations showed that for the first time all tuberculin-negative reactors at the beginning of the course, were also negative at the conclusion of the course. The investigation is being continued and the definite result awaited, but the authors feel they are justified in expressing the view that excessive tuberculous morbidity among medical students can be reduced by taking special precautionary

measures against tuberculous infection in hospitals and in rooms in which necropsy examinations of tuberculous subjects are performed.

*Tuberculosis Abstracts, December, 1940. The Incidence of Tuberculosis Among Students at Lund University, Erik Hedvall, M.D., Amer. Rev. of Tuber., Vol. XLI, No. 6, June, 1940.

THE MEDICAL MANAGEMENT OF URINARY INFECTION IN PREGNANCY

(Continued from Page 513)

and administered over a sufficient period of time, in doses commensurate with the degree of infection.

If, however, as it frequently occurs in the case of acute pyelonephritis, there is no alleviation of symptoms after a period of six or seven days, as a result of such therapy, more heroic measures should be instituted, such as renal lavage or placement of indwelling ureteral catheters.

NEWS NOTES

DUES

The following bulletin in regard to 1941 membership was forwarded to the secretaries of the county medical societies on November 15.

As is customary at the end of each year, we have enclosed a copy of the official membership report for your society. The front side of the report may be used for the listing of members and the reverse side is provided for the listing of ineligible and other physicians in your county.

The State Society dues for 1941 will be \$15.00 per member which, as you know, is in accordance with the action taken by the House of Delegates at the last annual session. Although the increase is substantial, it is believed that special assessments may thereby be avoided and that the additional amount will enable the Society to considerably expand its program. We sincerely hope that your members will agree with this action taken. Any local dues desired by your society may, of course, be added to the above amount.

The issuance of membership cards in addition to our other work presents a considerable task for the central office, and thus if some delay occurs in the handling of your report we ask your forgiveness.

We realize that the collection of dues occasions many difficulties for the secretaries of county medical societies, and we assure you that the Society is particularly appreciative of your assistance in this regard. If there is any way in which we can help we shall be happy to have you call upon us.

We have also listed below for your information the By-Laws provisions pertaining to county medical society annual reports:

Sec. 13. The secretary of each component society shall keep a roster showing the names of its members and the names of the non-affiliated registered doctors of medicine of that county, their addresses, colleges, dates of graduation, dates of

license to practice in this state, and such other information as may be deemed necessary. In keeping this roster the secretary shall note any changes in the personnel of the profession by death or by removal to or from the county, and in making his annual report shall account for every physician who has lived in the county during the year.

Sec. 14. The secretary of each component society shall forward the assessment of that society, together with its roster of officers, members and list of non-affiliated physicians, to the Executive Secretary on or before the first day of February each year.

Sec. 15. Any component society which fails to pay its assessment and make an annual report on or before the first day of February shall be held as suspended unless special permission is secured from the President, whereupon remittance of the assessment may be delayed not longer than April first of that year, and none of its members or delegates shall be permitted to participate in any business or proceedings of this Society, or the House of Delegates, until such requirements have been met. A member of any component society who is shown in an annual report to be in suspension for non-payment of dues shall be reinstated by said component society upon payment of his assessment during that year. If a member shall remain in arrears in payment of his dues beyond the following December 31, he shall lose his membership and shall not be entitled to reinstatement except upon formal action of his component society and upon payment of all assessments in arrears: Provided, that any member upon showing just and sufficient cause which prohibits his active local practice, may cause the necessity for formal readmittance and payment of dues in arrears to be waived by securing a leave of absence, demit, or other permission for non-membership from his component society at the time he intends to discontinue payment of assessments. The Council may waive the necessity for payment of dues in arrears if it finds that unusual circumstances make such action advisable.

COMMITTEES

The following is a report of recent activities of Society Committees:

The Committee on Control of Tuberculosis met in Topeka on November 10. The foremost matters discussed were: The need for additional tuberculosis sanatoria in the state, the present programs of the Kansas State Board of Health, the Kansas Tuberculosis and Health Association and the Norton Sanitarium; the tuberculosis and silicosis problem in the southeast portion of the state; endorsement of the tuberculosis Christmas seal program conducted by the Kansas Tuberculosis and Health Association and selection of a speaker on tuberculosis for the next annual session.

A meeting of the Committee on Public Policy was held in Topeka on November 8. Plans for the work of that committee for the coming year were discussed and prepared.

The Medical Advisory Committee on Pneumonia Control has forwarded a bulletin to the county medical societies advising that speakers can be provided on that subject.

A suggested talk on cancer for lay use has been sent to the county medical societies by the Society Committee on Control of Cancer. Another bulletin was forwarded by that committee on October 31 describing the availability of a Kansas State Board of Health truck which will present movies and exhibits on cancer at lay meetings.

Dr. L. M. Tomlinson of Harveyville, Chairman of the Committee on Stormont Medical Library is conferring with Justice W. W. Harvey, Director of the State Library, in regard to the possibility of providing a separate room or other more satisfactory housing for the Stormont Medical Library.

The Committee on Medical Schools met at Wichita on December 15.

APPOINTMENTS

The following appointments were recently announced:

Dr. W. M. Mills of Topeka as a member of the Executive Committee of the Western Surgical Association.

Dr. Marion Trueheart of Sterling as the Kansas Chairman of the American Society for the Control of Cancer.

Dr. C. C. Nesselrode of Kansas City as the Governor of Kansas for the American College of Surgeons.

MEDICAL BOARD

The Kansas State Board of Medical Registration and Examination met in Topeka on December 10-11. Examinations were given to twelve applicants and six applications for reciprocity were considered. Other Board matters were discussed. The names of the new licensees will be published in the next issue of the Journal.

INJUNCTION

Judge C. W. Ryan of the Twenty-second District Court, enjoined E. B. Martin of Wathena from the further practice of medicine on November 27, 1940. Martin had been charged with the practice of medicine and surgery without a license. The case was brought by the Kansas State Board of Medical Registration and Examination in conjunction with the county attorney of Doniphan County.

MEDICAL DEFENSE

The Selective Service System of Kansas announced recently that arrangements have been made wherein the medical examiners of the County Selective Service Boards may be assisted by the other doctors of medicine in their counties in the provision of physical examinations for draft registrants. The plan adopted for this purpose is as follows:

Arrangements can be made with the county boards for approval of the assisting physicians; the assisting physicians may then examine registrants and prepare

and sign their own findings on forms provided by the State Selective Service office; these forms are then attached to and permanently filed with the physical examination reports signed by the medical examiners.

This plan will obviously make possible the distribution of the work incidental to examination of selective service registrants among all doctors of medicine in each county and it will also enable rotating services, other group methods, and examinations on an individual basis to be used. The reason for the requirement of duplicate signatures by the medical examiners and the assisting physicians is the fact that official approval of the assisting physicians, as provided under the National Selective Service Act, would otherwise need to be obtained before their services could be utilized. It is believed that the above procedure will make it possible to avoid the delay and other difficulties which would be incidental to obtaining individual approval of assistant examiners.

The American Medical Association has supplied the following information prepared by Surgeon General Magee of the United States Army which contains an excellent description of probable future developments of the medical aspects of the national defense program:

Uppermost in the minds of all physicians is undoubtedly the question of National Defense and, at the present time, of the plan of the medical departments of the armed forces to meet the immediate twofold problem of furnishing an adequate medical service to the men of our unprecedented peacetime Army and Navy, and of training the large number of Medical Department trainees who, at the expiration of their twelve month military service, will pass to the Enlisted Reserve Corps and furnish the trained personnel required for mobilization in the event of a national emergency. The Surgeon General of the Army has furnished the following outline regarding the participation of the Medical Department of the Army in the 1940-1941 Military Training Program. It is felt that this timely article will be of great interest to the medical profession at large and of personal importance to those physicians whose participation in the Military Program is highly probable.

The total strength of the Army of the United States next Spring will be approximately 1,400,000. This represents a Regular Army of 400,000 officers and men, the National Guard of the several States Federalized as the National Guard of the United States, numbering 200,000 and citizens selected for military training during the coming twelve months—about 800,000 in number. The latter will receive their training in active units of the Regular Army and of the National Guard, in Regular Army inactive units activated for training purposes, in the numerous installations required for the overhead of these forces and in Enlisted Replacement Centers throughout the nine corps areas of the country.

The Medical Department is charged with providing adequate medical service for the entire Army of the United States at posts, camps, and stations within and beyond the continental limits of the United States. In each military station in the United States there will be a hospital with four beds for each 100 of the military population. The operating room, kitchen, messing facilities, and clinics in each of these hospitals will be of sufficient size to provide service for an additional one patient per 100 men so that in an emergency it will be necessary to construct only the additional ward buildings. Furthermore, there will

be general hospitals suitably located throughout the United States to provide an additional one bed per 100 of the military population.

The provision of five per cent of hospital beds which can be rapidly expanded to six per cent may appear excessive when compared with hospitalization provided for the civilian population of this country. However, all of the military sick, including such cases as in civilian life are ordinarily cared for in their home, must be treated in hospital since they cannot receive satisfactory care in the barracks. In addition, when young adults are brought together in large groups contagious and infectious disease that spread rapidly under such conditions occur much more frequently than in civil life. Furthermore, sufficient beds must be provided for the care of the sick during the winter and spring seasons of the year when there is always an excessive number of such cases.

Scattered throughout the large camps or stations there will be dispensary buildings and dental clinics for the infirm care and dental treatment of the personnel. In addition, in each large camp there will be a medical headquarters, with properly qualified scientists for the general supervision of the medical activities, including the protection of the health of the troops, the careful inspection of food products, and the general supervision of the nutrition of the men.

The Medical Department will be charged with the training of the Medical Detachments and the Medical Department Units of the Regular Army and the National Guard, and with the instruction of the service personnel in hospitals and other installations. It is also responsible for the preparation of the trainees in Enlisted Replacement Centers, in hospitals and in service schools, who will receive there the individual Medical Department instruction which will permit their incorporation in organizations for further unit training.

The initial requirement will be approximately 6.5 doctors for each 1000 men in the military service. Rapid calculation will show that the total number for an Army of 1,400,000 men will be 9,100 doctors. Additional ones may be required, but in the interest of economy the initial procurement will be limited to the number stated. The 1200 physicians in the Regular Army and the 1100 in the National Guard are included in the total, leaving approximately 6800 physicians to be supply by the Reserve Corps. There are now approximately 1500 Reserve physicians, leaving 5300 to be procured during the next few months.

Under the present Joint Resolution passed by the 76th Congress, the President is authorized to order into the active military service of the United States for a period of twelve consecutive months each, any or all members of any Reserve component of the Army of the United States, with or without their consent, to such extent and in such manner as he may deem necessary for the strengthening of the National Defense. If a sufficient number of officers do not indicate their availability for this service, Reserve officers must necessarily be ordered to duty without their consent. Additional appointments among physicians of draft age will increase the strength of the Medical Corps Reserve. However, it is apparent that a very large percentage of these officers must participate actively in the present program for preparing a portion of the country's man power for National Defense.

In establishing rosters from which officers will be

ordered to duty, Corps Area Commanders and Chiefs of Branches have been instructed to circularize all Reserve officers under their assignment jurisdiction to permit them to state the amount of deferment desired and the cogent, pertinent reasons for such deferment in the event that they are not immediately available for military service. This action has been taken in view of the fact that a national emergency has not been declared by the Congress, nor has mobilization been ordered. The medical service of a training program, although essential to national preparedness, possesses none of the glamour of the same service during actual military operations; it is, however, equally important. Indeed, military training may, through the thoroughness of its preparation for war, materially assist in preventing the necessity of participation in military operations. It is realized, of course, that all officers would express their immediate availability in the event of war; many, however, feel that their services are not of national importance at the present time.

Both the economic and the rational utilization of medical officers is essential. It is planned that inasfar as possible qualified officers will be selected for assignment to duty with units and at installations according to their previous training and experience. Accordingly, selection must be qualitative as well as quantitative in order that the specific requirements of a modern medical service may be properly met. Officers selected for duty will be given the maximum possible advance notice of such action.

In this connection the Surgeon General has suggested that the following points be brought to the attention of all Reserve medical officers:

- 1. When notified that you have been selected for active duty, submit at once the required report of physical examination. The disclosure of disqualifying defects prior to the issuance of orders may prevent a disruption of your practice or civil employment.
- 2. Orders issued will place you on active duty at your home or, if a temporary change of address has been submitted, at that location, and will direct you to report to a specific post, camp, or station for duty.
- 3. Travel to your station may be accomplished by automobile but no delay will be granted for that purpose above the customary time for travel by rail.
- 4. You will be reimbursed for travel at the rate of eight cents a mile, based on the shortest usual railway route to your station.
- 5. Transportation for dependents to your first station will not be furnished by the Government. It is perhaps advisable that your family not accompany you since the housing problem at or within the vicinity of Army stations is frequently acute.
- 6. If you have no uniform and military equipment, these may be purchased at your first station.
- 7. Pay and allowances are as shown in the following table.

Grade	Annual Base Pay	Allowances			
		Rental Allowance	Subsistence Allowance (30 days)		
		With Depend-	Without Depend-	With Depend-	Without Depend-
		ents	ents	ents	ents
Colonel	\$4,000	\$120	\$80	\$36	\$18
Lieut. Col...	3,500	120	80	54	18
Major	3,000	100	60	54	18
Captain	2,400	80	60	36	18
1st Lieut.....	2,000	60	40	36	18

Merry Christmas

to Our

Advertisers

THE EDITORIAL BOARD, members of The Kansas Medical Society and our office force extend to our faithful friends, the regular advertisers in the columns of the Journal a most happy and successful Christmas and new year. Editorially and Scientifically the Journal is what our members and guests make it. Because of our advertisers our Journal exists for you our readers. So again *Merry Christmas and a prosperous New Year* to our faithful friends — the Journal advertisers.

American Optical Company
 Archer Prescription Shop
 Arnold Drug Company
 Balyeat Hay Fever & Asthma Clinic
 Camp Company, The S. H.
 Capper Printing Company
 Cook County Graduate School of Medicine
 Coca-Cola Company, The
 Corn Products Refining Company
 Debour Publishers
 General Electric X-Ray Corporation
 Grandview Sanitarium
 Hanicke Mfg. Company, The P. W.
 Holland Rantos Company, Inc.
 Hollabaugh's Drug Store
 Hotel Allis
 Hotel Jayhawk
 Hotel Lassen
 Hotel Muehlebach
 Hyson, Westcott & Dunning
 George Innes Company
 Isle Company, The W. E.
 Johnson Hospital
 Kansas City Southwest Clinical Society
 Kansas Gas & Electric Company
 Kansas Industrial Development Commission
 Lattimore Laboratories
 Library, University of Kansas
 Lilly & Company, Eli
 Luzier, Inc.
 Major Clinic, The
 Mead Johnson & Company

Medical Protective Company
 Mosby Company, The C. V., Publishers
 National Assn. Chewing Gum Mfg.
 Nestle's Milk Products, Inc.
 Oakwood Sanitarium
 Oklahoma City Clinical Society
 Overton Electric Company
 Parke, Davis & Company
 Petrolagar Laboratories, Inc.
 Philip Morris & Company
 Physicians Casualty Association
 Quinton-Duffens Optical Company
 Radium & Randon Corporation
 Ralph Sanitarium, The
 Robinson Clinic, The
 Service Print Shop
 S. M. A. Corporation
 Smith-Dorsey Company, The
 Smith, Kline & French Laboratories
 Squibb & Sons, E. R.
 Stokes Hospital, The
 Tilford's Drug Stores & Pharmacies
 Trowbridge Training School
 Upjohn Company, The
 Walker Brothers-Camp Representatives
 Wesley Hospital
 Wichita Hospital
 Winthrop Chemical Company
 Woodcroft, Hospital
 Wyeth Bros., Inc., John
 Zemmer Company, The

The annual base pay is increased at the rate of five per centum thereof for each three years of service up to thirty years. Full time will be computed for all periods during which they have held commissions as officers in the Army, Navy, Marine Corps, Coast Guard, Coast & Geodetic Survey, and Public Health Service, or in the National Guard or Naval Militia, the National Naval Volunteers, or in the Naval Reserve Force or Marine Corps Reserve, when confirmed in grade and qualified for all general service, and with full time for all periods during which they have performed active duty under Reserve commissions, and with one-half time for all other periods during which they have held Reserve commissions.

Physicians as a group will not be exempt from conscription for military training and service. Their deferment because of importance of civil communities is a function of the Local Draft Boards. Accordingly, it is difficult to approximate the number which will be inducted into the Army. Obviously, the training received by such draftees will be more appropriate and the services rendered the Army of greater value if the physicians who are eligible and qualified for appointment in the Medical Corps Reserve be commissioned in the Officers Reserve Corps for duty as medical officers, rather than continue their training as enlisted men.

Physically qualified graduates of approved schools of medicine who desire appointment in the Medical Corps Reserve for immediate active duty should make application to the Commanding General of the Corps Area in which they reside. Such applications may be submitted either before or after selection for military training and service, or after induction into the Army of the United States. No change in the classification of such applicants will, however, be made by local selective service boards, until the actual letter of appointment has been received.

Appointments in the Medical Corps of the Regular Army will, in all probability, continue as at present through competitive examinations of Reserve officers who have not passed the age of thirty-two years at the time of appointment.

The Surgeon General of the Army, through Lieut. Colonel George C. Dunham the representative of the Medical Department in the House of Delegates, submitted a request to that body at its last meeting in New York in June, 1940, requesting the assistance of the American Medical Association, in the classification and procurement of physicians for the Army. It was hoped in this way to procure the physicians required without disturbing too seriously the civilian medical service and at the same time to place the physicians enrolled in positions for which their previous training qualified them. The House of Delegates approved the request of General Magee and appointed a Medical Preparedness Committee. The U. S. Navy and the U. S. Public Health Service made similar requests.

Reference has been made to the action of the House of Delegates and to the working of the Preparedness Committee in previous issues of the Journal. The Preparedness Committee, the executive officers of the American Medical Association, the chairmen and members of the various States and local committees, have all given generously of their time and funds in this work. They have been of material assistance to the Surgeon General and Corps Area surgeons in the classification and procurement of Reserve Corps

medical officers. They generously have offered their assistance in similarly classifying and procuring such physicians as may be required in addition to those in the Reserve Corps. Although the majority of appointments of additional Reserve officers for active duty at this time will be thirty-five years of age or under, a limited number of properly qualified physicians above this age will be required as chiefs of services of the many large hospitals to be established.

The history of our country has repeatedly shown that there is no more patriotic group than the American physicians. They have always responded generously to their country's call for assistance. At this time, although this country is not engaged in war, the National Preparedness Program requires an adequate medical service. Without it, the program will be hampered materially. In addition to the adequate care of the sick and protection of the health of our young men in the camps, the Medical Department must be able to train its personnel to act in conjunction with the troops of the other Arms and Services so that in time of battle, if unfortunately that time should come, it may be able to collect efficiently and evacuate promptly casualties that occur on the battlefield so that each one may receive as promptly as possible efficient medical care. Let us repeat, the success of the National Preparedness Program depends to a large extent upon adequate medical service. American medicine appreciates its obligations and will furnish a sufficient number of properly qualified physicians.

The American Medical Association advises that all but 148 of the 2,066 medical preparedness questionnaires forwarded to this state have been returned. The Society is now corresponding with the physicians who have not replied in an effort to obtain their questionnaires.

MILK SUPERVISION

The Kansas Supreme Court handed down an opinion on December 7 pertaining to the supervision of milk control. The case, State of Kansas vs. Fred H. Reynolds, which arose in Douglas County, involved a question as to whether the Kansas State Department of Agriculture or the Kansas State Board of Health has authority over certain phases of milk control in this state. An excerpt from the opinion is as follows:

"The sale of impure, unsanitary, unwholesome milk and other dairy products is an offense under specific statutes, independent of any rules and regulations and there are no contentions that representatives of the Board of Health may not be competent witnesses in prosecutions thereunder.

The standards for milk and other dairy products, specifically established by milk acts, cannot be altered by administrative rules or regulations.

Upon the State Dairy Commissioner and his deputies has been placed the duty of enforcing the Milk Acts, and upon the State Board of Health has been conferred the sole power of promulgating rules and regulations as to all matters covered by such statutes.

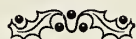
While we do not now finally determine the matter, we express the present opinion that the State Board of Health has authority in enforcement of provisions of the Food and Drug Acts dealing with the adulteration and misbranding, to adopt reasonable regulations in the matter of Pasturization and with reference to the bacterial count and such other scientific and medi-

JACK, FRED, ART, MARSHALL and
BOB



Extend to you their best wishes for a

Happy Holiday Season



**QUINTON-DUFFENS
OPTICAL COMPANY**

TOPEKA

HUTCHINSON

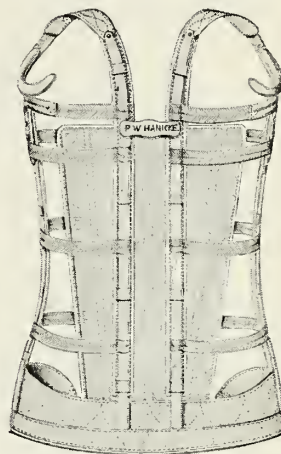
SALINA

Your Local Independent Wholesaler

SPINAL BRACE

(Washburn's Design)

For Fracture of Spine
and Tuberculous Spine



P. W. HANICKE MFG. CO.

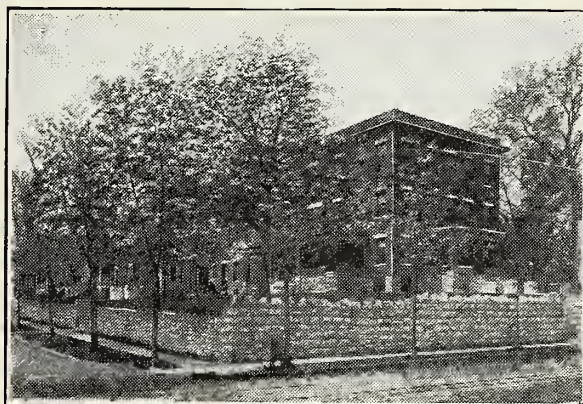
1013 McGee Street
KANSAS CITY, MO.
Tel. Victor 4750

THE MAJOR CLINIC ASSOCIATION

3100 EUCLID AVENUE

KANSAS CITY, MISSOURI

A Well
Equipped
Institution
for the
Nervous and
Mental
Diseases and
Drug and
Tobacco
Addictions
Alcohol,



Beautiful
Location
Large,
Well Shaded
Grounds,
Spacious
Porches,
All Modern
Methods for
Restoring
Patients to a
Normal
Condition

HERMON S. MAJOR, M.D.
Medical Director

HENRY S. MILLETT, M.D.
Associate Medical Director

HERMON S. MAJOR, JR.
Business Manager

cal factors of milk as far as the essential nature, character and constituent elements are concerned, such regulations being based upon protection of the public health and the prevention of deception; and to prescribe proper branding or labeling requirements in connection therewith. Such regulations, however, may not lawfully deal with matters of production, handling and sale within the jurisdiction of the State Board of Agriculture.

Regulatory laws are seldom administered without difficulties. Co-operation is needed—by those who are regulated and by those who do the regulating. A considerate attitude, as well as firmness is called for. In the instant case there appears no reason why each of the two agencies involved should not avail itself fully and freely of the counsel of the other."

As the above excerpt indicates, the Court found that authority for this work had been conferred upon the Department of Agriculture by specific statute, that the authority of the Board of Health was based merely upon its power to make regulations and that in a conflict between statutory and regulatory powers, the statutory authority must necessarily override.

MEETING

The Kansas Crippled Children's Commission held a joint meeting with the Kansas orthopedists in Topeka on December 7. Plans were discussed for the appointment of a medical advisory board for the Commission and for the furtherance and improvement of other phases of the Crippled Children's Program.

TECHNICIANS SEMINAR

The Second Annual Technicians Seminar held in Topeka on December 10-11-12 at the Hotel Jayhawk had a registration of seventy-one from all parts of the state. The main feature of this year's program was technical laboratory procedure. Speakers were: Dr. C. J. Weber of Kansas City; Dr. V. D. Foltz of Manhattan; Dr. Cora Downs of Lawrence; Dr. A. J. Mix of Lawrence; Dr. N. P. Sherwood of Lawrence; Dr. R. C. Arnold of New York City, and Mr. Allen Gold, Mr. H. C. Ebendorf, Mr. A. C. Keith, Mr. Frank Victor, Mr. Charles Hunter, and Dr. J. L. Lattimore of Topeka.

COUNTY SOCIETIES

The Allen County Medical Society met on November 19 in Iola. The speakers were: Dr. O. L. Cox of Iola, who spoke on the History of Medicine in Allen County, and Dr. A. F. Rossitto of Wichita.

The Dickinson County Medical Society elected the following officers at its November meeting: President, Dr. H. R. Turner of Hope; Vice-President, Dr. T. R. Conklin, Sr., of Abilene; Secretary-Treasurer, Dr. Daniel Peterson of Herington; and Delegate, Dr. W. Klingbery of Hope.

The Douglas County Medical Society held a meeting in Lawrence on December 3. The following officers were elected for the coming year: Dr. James M. Mott, President; Dr. R. B. Hutchinson, Vice-President; Dr. Wray Enders, Secretary; Dr. E. M. Owen, Treasurer; Dr. L. K. Zimmer, Censor, and Dr. H. L. Chambers and Dr. L. S. Powell, State

Delegates. Dr. R. A. Schwegler presented a motion picture on "Local Anesthesia in Obstetrics."

The Franklin County Medical Society held a meeting in Ottawa on October 30. Dr. F. L. Loveland of Topeka spoke on "Medical Preparedness." At the November 27 meeting Dr. Arthur Gray of Topeka spoke on "The Modern Treatment of Venereal Disease."

The Lyon County Medical Society held a meeting in Emporia on December 3. The following new officers were elected: Dr. H. C. Nutting of Emporia as President; Dr. M. W. Woodhull of Cottonwood Falls as Vice-President; and Dr. C. H. Munger of Emporia as Secretary-Treasurer. Dr. Harry Davis of Topeka spoke on "Placenta Previa."

The Marion County Medical Society held a meeting on November 20 at Marion with the members of the Harvey County and the McPherson County medical societies as guests. Speakers for the meeting were Dr. Fred E. Angle and Dr. William H. Algie of Kansas City. Dr. Angle discussed "The Clinical Diagnosis and Treatment of Undulant Fever" and Dr. Algie reviewed "The Chemotherapy and Serotherapy of Pneumonia."

The Miami County Medical Society held a meeting on November 13 in Paola. Guest speakers were: Dr. J. H. Ogilvie of Kansas City, Missouri, who spoke on "Pills, Poisons and Personality"; Dr. D. O. Walthall of Kansas City, Missouri, who spoke on "Chemotherapy" and Dr. F. A. Charmichael, Jr., of Kansas City, Missouri, who discussed "Head Injuries." The next meeting of the society will be held in Paola on December 11.

The Sedgwick County Medical Society met on October 15 in Wichita. Speakers were: Dr. Richard L. Sutton, Jr., of Kansas City, Missouri, who spoke on "Acne Vulgaris and Lipoid Metabolism, the Etiology and Therapy of Acne" and Dr. D. O. Walthall of Kansas City, Missouri, who spoke on "Staphylococcal Infection; Antitoxin and Sulfathiazol Therapy."

The Shawnee County Medical Society elected the following officers at a meeting held in Topeka on December 2. Dr. L. R. Pyle, President; Dr. E. H. Decker, President-Elect; Dr. A. J. Brier, Vice-President; Dr. F. C. Taggart, Secretary; Dr. Guy A. Finney, Treasurer; and Dr. A. K. Owen on the Board of Censors. The speaker at the meeting was Dr. Paul C. Barton, Director of the Bureau of Investigations of the American Medical Association of Chicago, who spoke on "Foods, Drugs and Cosmetics." The wives and guests of members attended.

The Southeast Kansas Medical Society held a banquet on October 23 in Parsons. Dr. J. N. Sherman of Chanute was elected President of the organization for the coming year, and Dr. C. S. Stotts of Fredonia was elected as Secretary-Treasurer.

The Wilson County Medical Society met on October 14 in Neodesha with the Wilson County Auxiliary as guests at a banquet.

The Wyandotte County Medical Society held a meeting on December 3 in Kansas City. Speakers were: Dr. C. Omer West of Kansas City, who discussed "Verrucae," and Dr. W. W. Summerville and Dr. T. R. Hamilton both of Kansas City who spoke on "Cystic Endometrial Hyperplasia." Speakers for the December 17 meeting will be Dr. L. F. Barney and Dr. W. L. Algie of Kansas City.

RADIUM RENTAL

- Our rates are the lowest, applying only to the actual time of use.
- Newest platinum containers, with wide dosage range. Applicators loaned.
- Our insurance protects you against loss of, or damage to, the radium.

Write for Details

Radium and Radon Corporation

Marshall Field Annex, Chicago
Phone Randolph 8855

JOHNSON HOSPITAL CHANUTE, KANSAS

Complete Clinical

Laboratory

Radium

X-Ray

The Library of the Medical Department of the University of Kansas has every desire to be of service to the medical profession in the state. Any physician who wishes to avail himself of the facilities of the Library will be welcome both in the use of its periodicals, bound volumes of periodicals, and monographs and text-books.

Under certain circumstances, provided the volumes are not being actively used by the students, the Library will send such volumes as are needed to physicians in the state, on request, for a period of one week, provided carriage charges are paid both ways.

THE UNIVERSITY OF KANSAS SCHOOL OF MEDICINE

... Technique

Correct typography and perfect printing is as essential in the well ordered professional office as any other physical equipment. Master Craftsmen plan and execute every piece of printed matter. The growing list of publications, books, periodicals, magazines, and broadsides is a guarantee of superior and forceful attention compelling publicity. Call today . . .

PHONE 5956

SERVICE PRINT SHOP

for COMPLETE
PRINTING SERVICE

1515 LANE

TOPEKA, KANSAS

WOODCROFT HOSPITAL

A modern institution for the scientific
care and treatment of those nervously
and mentally ill, the senile and addicts

PUEBLO, COLORADO
Phone 84

Write for Information

CRUM EPLER, M.D.
Superintendent

MEMBERS

The November 2 issue of Clinical Abstracts printed a review of the article "Lipoid Pneumonia, With Report of a Case" by Dr. Robert M. Carr, of Junction City, which was published in the September Journal.

Dr. Wray Ender of Lawrence has been named health officer for the City of Lawrence to succeed Dr. J. M. Mott, who will leave soon for military duty.

The article on "Artificial Fever Therapy" by Dr. Leland F. Glasser formerly of Kansas City and now of Springfield, Missouri, which was published in the May issue of the Journal, was reprinted in brief in the International Abstract Section of the October issue of Archives of Physical Therapy.

The article by Dr. Harold T. Gross of Manhattan entitled "Erysipeloid" which was published in the August Journal was abstracted in the October issue of the Ohio State Medical Journal.

Dr. George Gsell of Wichita was the speaker before the Lyons Club of Harper on November 21. Dr. Gsell spoke on "The Eyes and Their Care."

An abstract of the article on "Treatment of the Commoner Injuries of the Hand" by Dr. L. S. Nelson of Salina which was published in the June issue of the Journal, was reprinted in the November 1940 issue of Current Medical Digest.

The November 9 issue of Clinical Abstracts printed an abstract of the article "Biological and Biochemical Studies of Curare, Preliminary Report" by Dr. M. E. Pusitz, Dr. J. L. Lattimore, Mr. Allen Gold, and Mr. Harry Eberdorf of Topeka, which was first published in the September issue of the Journal.

Dr. Norman Reider of Topeka was the author of a case report on "Neuropsychiatric Complications Following Severe Loss of Blood" which was published in the November 1940 issue of Archives of Neurology and Psychiatry.

Dr. Fred E. Rogers formerly of Linn is doing post-graduate work at the Cook County Graduate School of Medicine in Chicago, Illinois.

Dr. Ernest M. Seydell of Wichita is the author of an article on "Indurative or Myalgic Headache" which was published in the November, 1940, issue of Archives of Otolaryngology.

The work of the Cherokee Health Department and of Dr. Joseph W. Spearing in regard to tuberculosis and silicosis control was described in the November news letter of the American Public Health Association and in an article by Dr. Alice Hamilton in the August issue of the Survey Graphic.

DEATH NOTICES

Dr. Clarence R. Hepler, 66 years of age, of Parsons, died on November 17. Dr. Hepler was born in Clarion County Pennsylvania in 1874 and came to Manhattan, Kansas, when he was ten years of age. He was graduated from the University College of Medicine of Kansas City in 1902. At the time of his death he was assistant superintendent of the State Hospital at Parsons. He was a member of the Labette County Medical Society.

Dr. Lamoile Rush King, 75 years of age, died on November 4 at his home in Junction City. Dr. King was born December 16, 1864, in Iowa County, Iowa. He was graduated from the University of Illinois, College of Medicine, in 1890 and interned at the Cook County Hospital, Chicago. He was a member of the Geary County Medical Society.

Dr. Benjamin P. Smith, 60 years of age, died on November 5 at his home in Neodesha. Dr. Smith was born in Clyde, Kansas, on November 23, 1879. He was graduated from the Medico-Chirurgical College of Kansas City in 1904. He was a member of the Wilson County Medical Society.

Dr. Michael R. Spessard, 66 years of age, died on October 20 of coronary occlusion, at his home in Beloit. Dr. Spessard was graduated from the Marion-Sims College of Medicine, in St. Louis, Missouri, in 1893. He was a member of the Mitchell County Medical Society.

BOOK NOOK

BOOK REVIEWS

THE PRACTICE OF MEDICINE, Third Edition—Jonathan Campbell Meakins, M.D., L.L.D. Published by the C. V. Mosby Company of St. Louis, Missouri, 1940. Price \$10.00. The author, who with the assistance of a very few contributors, produced an excellent treatise on the practice of medicine in 1936, has now revised the text for its third edition. The many important advances in chemotherapy, the vitamins, hypertension, and other fields of medicine are incorporated to bring the work up to date.

The same general form as followed by the previous edition is retained. Treatment is discussed very satisfactorily. This book is one for every day use. D.C.W.

VARICOSE VEINS—Alton Ochsner and Howard Mahorner. Published by C. V. Mosby Company. Price, \$3.00. A thorough but concise discussion of the anatomy, pathology, physiology and etiology of varicose veins; a review of the clinical aspects of varicose veins and the various tests which are of value in the study of these patients; and an outline of an efficient method of treatment of the veins and their complications, all go together to make this an excellent monograph—one well worth reading (and re-reading) by physicians who are doing or referring this type of work. There is an excellent discussion of the indications for saphenous ligation, and a detailed description of a technique of ligation which has served the authors well. There is a very extensive bibliography at the conclusion.

One feels from reading the book that the authors have a sound reason for all measures they advocate, and that they are not being "led astray" by excessive enthusiasm for some pet procedure to the exclusion of others. It is recommended as an excellent addition to the rather extensive literature on varicose veins. O.R.C.

SUPERFLUOUS HAIR AND ITS REMOVAL—A. F. Niemoeller, A.B., M.A., B.S. Foreword by M. H. Marton, M.D. Published by Harvest House, 70 Fifth Avenue, New York City. Price \$2.00. This is apparently a book for laymen regarding the safe methods of removal of hair. Very sane advice is given in reference to the danger of

A New and Important Surgical Book!

"FOREIGN BODIES LEFT IN THE ABDOMEN"

SURGICAL PROBLEMS

CASES

TREATMENT AND PREVENTION

LEGAL PROBLEMS

CASES

DECISIONS

RESPONSIBILITIES

Possibly no accident following abdominal section is more dangerous than the leaving of a foreign body in the abdomen. It is tragic for the operator and dangerous for the patient. To the casual observer it seems almost impossible for such an accident to happen, but statistics show that it does happen, and frequently. This new book is the first text ever written upon this important surgical problem. It has been written and published in the hope that the focusing of the attention of the surgeon on this subject will help to lessen the possibility of the occurrence of this type of accident.

CONTENTS

- | | |
|--|---|
| 1—Presenting the Surgical Problem | 8—Swallowed Articles in the Abdomen |
| 2—Sponges Lost in the Abdomen (Detailed Case Records) | 9—Deception and Malingering |
| 3—Sponges Lost in the Abdomen (Diagnosis and Treatment) | 10—Presenting the Legal Problem |
| 4—Sponges Lost in the Abdomen (Prevention of the Accident) | 11—Theories of Recovery in Sponge Cases |
| 5—Instruments Left at Abdominal Operations | 12—Theories of Defense in Sponge Cases |
| 6—Drains Lost in Peritoneal Cavity | 13—Statute of Limitations |
| 7—Foreign Bodies Left in Other Operations | 14—Other Foreign Body Cases |
| | 15—Damages |
| | Bibliography |

By H. S. CROSSEN and DAVID F. CROSSEN

764 Pages

212 Illustrations

Price, \$10.00

Other MOSBY Books

OPERATIVE SURGERY—By J. Shelton Horsley and Isaac A. Bigger. 5th Ed. 2 Vols. 1567 pages, 1391 illustrations. Price, \$18.00.

PRINCIPLES OF SURGICAL CARE—By Alfred Blalock. 308 pages, 13 illustrations. Price, \$4.50.

OPERATIVE ORTHOPEDICS—By Wills C. Campbell. 1154 pages, 845 illustrations, 4 color plates. Price, \$12.50.

Synopsis of **OPERATIVE SURGERY**—By H. E. Mobley. 375 pages, 339 illustrations, 39 color plates. Price, \$4.50.

Synopsis of **PRINCIPLES OF SURGERY**—By Jacob K. Berman. 596 pages, 274 illustrations. Price, \$5.00.

This Christmas Give a Book!

Let the coupon below do your Christmas shopping for you! Give Crossens' new volume—or select others listed here. Pay for them on easy terms of \$3.00 a month.

THE C. V. MOSBY COMPANY

3525 Pine Blvd.

St. Louis, Mo.

Gentlemen: Send me the following book(s):

Dr. _____

Address _____

KMJ 12-40

x-ray treatment for hypertrichosis. Also safety of electrolysis, but the difficulty of procedure.

The last chapter of the 155-page book is given to safer bleaches and depilatories for home use which, as every doctor knows, is always dangerous advice. E.H.D.

PRINCIPLES OF HEMATOLOGY—By Russell L. Haden, M.A., M.D., Chief of the Medical Division of the Cleveland Clinic, Cleveland, Ohio; formerly Professor of Experimental Medicine in the University of Kansas School of Medicine, Kansas City, Kansas. 348 pages; 14.5 x 23.5 cm. Lea and Febiger, Philadelphia. 1939. Price, \$4.50. Cloth.

The author has a very simplified and practical approach to the management of hematological disorders. The important features of his lectures in hematology given while associated with the Kansas University School of Medicine with recent developments bringing the matter up to date are included in the book. There are numerous adequate photomicrographs. There are diagrams which keep the entire subject-matter clear. One of the best features of the book are the 100 selected case histories embracing not only that field which is the delight of the expert hematologist but also the blood disturbances common with almost every case of illness. A sane therapeutic approach is upheld throughout. The simpler and more common laboratory procedures are given in detail. The book should be well received by all laboratories, general practitioners and internists. C.W.E.

MEDICAL WORK OF THE KNIGHTS HOSPITALERS OF SAINT JOHN OF JERUSALEM—Lieutenant-Colonel Edgar Erskine Hume. Cloth. \$3.00. Pp. 371 with 130 illustrations, Baltimore, Johns Hopkins Press, 1940.

This book by Colonel Hume, which is obviously a labor of love, is an extremely valuable contribution to medical history. We find here a most interesting account of the Knights of St. John of Jerusalem from their foundation during the period of the First Crusade down to the present—an uninterrupted, although extremely adventurous course through eight centuries. The history of this venerable order, with its age-old admonition to its knights that they treat alike all sufferers from disease or wounds regardless of race or creed, should be an absorbing story to every physician.

The book is beautifully bound and illustrated with a large number of interesting and well-executed illustrations. The foreword is written by His Most Eminent Highness Fra Ludovic Chigi-Albani, Grand Master of the Order, and there is a preface by Lieutenant-General Sir Aldo Castellani, K.C.M.G., the eminent epidemiologist, who is a knight of this order. This book would make an excellent Christmas present to some friend who is a physician. R.H.M.

Two interesting booklets have recently been received by the Society office from the American Heart Association, entitled, "Standardization of Blood Pressure Readings" and "Examination of the Heart." They are published by the American Heart Association and are the result of careful study by joint committees appointed by the Association and the Cardiac Society of Great Britain and Ireland. The purpose of the Examination booklet is to outline the clinical examination of the heart without the help of any instrument other than the stethoscope. Copies of these booklets can be obtained by addressing the American Heart Association, Inc., 50 West 50th Street, New York, or by addressing the Committee on Study of Heart Disease, The Kansas Medical Society.

BOOKS RECEIVED

CONGENITAL SYPHILIS—Charles C. Dennie, B.S., M.D., Professor of Dermatology, University of Kansas Medical School; Chief of the Department of Dermatology and Syphilology of Bell Memorial Hospital, Kansas City, Kansas; General Hospital and Children's Mercy Hospital, Kansas City, Kansas; and Sidney F. Pakula, B.S., M.D., Visiting Pediatrician to Children's Mercy Hospital, Kansas City General Hospital, Alfred Benjamin Clinic, and Menorah Hospital, Kansas City, Missouri. Published by Lea & Febiger, Philadelphia, Pa., 1940. Price \$8.00. Illustrated with 133 engravings, and 596 pages.

SYNOPSIS OF MATERIA MEDICA, TOXICOLOGY, AND PHARMACOLOGY, For Students and Practitioners of Medicine—Forrest Ramon Davison, B. A., M.Sc., Ph.D., M.B., Assistant Professor of Pharmacology in the School of Medicine, University of Arkansas, Little Rock. Published by the C. V. Mosby Company, St. Louis, Missouri, 1940. Containing forty-five illustrations with four color plates and 633 pages. Price \$—

SYNOPSIS OF PEDIATRICS—John Zahorsky, M.D., assisted by T. S. Zahorsky, M.D. Third Edition, Price \$4.00. Published by the C. V. Mosby Company, St. Louis, Missouri, 1939.

NEW AND NONOFFICIAL REMEDIES, 1940—Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1940. Published by the American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

THE 1940 YEAR BOOK OF PUBLIC HEALTH—J. C. Geiger, M.D., Dr. P.H. Director of Public Health, City and County of San Francisco; Clinical Professor of Epidemiology, University of California. Published by the Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, Illinois. Price \$3.00. Table of Content includes: Communicable Diseases and Epidemiology—General, Tuberculosis, Poliomyelitis, Malaria, Venereal Diseases; Food and Milk; Nutrition; Housing; Statistical; Laboratory; Industrial Hygiene; Administration—Medical Care, Maternal Care; Health Education; Child Hygiene—General, Dental Hygiene, Mental Hygiene, Nursing.

KANSAS MEDICAL ASSISTANTS

The medical assistants in the Fifth Councilor District organized the Ford County Medical Assistants Society on October 31. Ten of the fourteen members are from Dodge City, three from Garden City, and one from Satanta. Miss Patricia Whaley of Dodge City is President; Miss Leo Sayre, Dodge City, Secretary; and Miss Leora Howe, Dodge City, Councilor of the Fifth District. The next meeting of the group will be a Christmas party.

The Sedgwick County Medical Assistants Society met at the Innes Tea Room on November 20, for dinner. Thirty-one members were in attendance. Mr. Mohrbacher of the Wichita Credit Bureau presented a movie entitled "Credit—The Life of Business."

The Topeka Physicians Assistants Society met for its Christmas party on December 2. Following a gift exchange Mr. Lahnoe Euler showed the members colored films of Puerto Rico.

The Wyandotte County Medical Assistants Club, under the direction of Rowena Reising and Margaret Winterscheidt, recently published the first edition of its bulletin. It is in the form of a four-page pamphlet, carries advertising, and news of its members.

Alcohol — Morphine — Barbital

Addictions Successfully Treated Since 1897 by the Methods of Dr. B. B. Ralph



Write for descriptive booklet

THE RALPH SANITARIUM

Ralph Emerson Duncan, M.D.

Director

529 Highland Ave.

Kansas City, Mo.

Telephone—Victor 4850

Registered by the Council on Medical Education and Hospitals of the A.M.A.

PROFESSIONAL PROTECTION



A DOCTOR SAYS:

"The conduct of this case was a display of brilliant generalship."

THE

MEDICAL PROTECTIVE COMPANY

OF

FORT WAYNE, INDIANA

REPRINT PRICE LIST

Reprints from articles in the
KANSAS MEDICAL JOURNAL

All Reprints are made the same size as
Journal pages, 7 $\frac{3}{4}$ x 10 $\frac{1}{2}$ inches.
Transportation charges on reprints are
to be paid by the Author

No. Copies	Pages	Without Cover	With Cover
100.....	4	\$ 9.00	\$12.25
250.....	4	9.75	14.50
500.....	4	11.00	17.50
1000.....	4	18.00	26.00

No. Copies	Pages	Without Cover	With Cover
100.....	8	\$12.50	\$16.00
250.....	8	14.00	18.00
500.....	8	16.00	23.00
1000.....	8	21.00	32.00

No. Copies	Pages	Without Cover	With Cover
100.....	12	\$16.00	\$20.50
250.....	12	18.25	23.50
500.....	12	21.25	28.25
1000.....	12	28.00	39.00

CAPPER PRINTING CO.

Capper Building,
TOPEKA, KANSAS



Hotel Jayhawk

TOPEKA ~ KANSAS

Main Dining Rooms and Coffee Shop

Air Conditioned and Refrigerated

Many Private Dining Rooms Available for Special Parties

THE MOSBY HOTEL CO.

N. M. Mosby, Pres. & Gen. Mgr.

AUXILIARY

PRESIDENT'S MESSAGE

Our thoughts turn again at this season of the year toward the star in the East and the light which lead the wise men to the manger which has revolutionized the world.

"Light" is the key word of the spirit of Christmas so let us take it as our Auxiliary slogan as we forge ahead in our work of breaking thru the darkness of ignorance by spreading the light of knowledge of health and the objectives of organized medicine to the laity.

"Man overboard" was the cry heard by a man in his cabin as his steamer ploughed thru the ocean in the dark of night. The man in his cabin, realizing he could do nothing to help on deck, knew that a light would be needed. Taking the small lamp in his cabin to the port hole, he held it so the light would shine across the waters and it was his light that showed where to cast the rope to save the life of the struggling man.

As torch bearers of The Kansas Medical Society it is our obligation to light the way in an effort to save the lives and health of the people of our own community and state.

Hygeia—one of our torches, offers us an opportunity to disseminate much light and this Christmas season is a splendid time for us as doctors families, to use it for gifts. Because our contest soon closes it is a good time for Auxiliaries to place it in more schools, libraries and the hands of more readers.

As I think of our state medical family today, because it is Christmas time, I am wishing you happiness. And tomorrow I shall still wish you happiness; and so on thru the year.

Mrs. Irma Blasdel.

THE HOME OF THE A. M. A.

The National Board members visited the seven floors of the home of the A.M.A. where we found 700 busy people compiling records, assembling materials for the A.M.A. Journal, Hygeia and all sorts of medical information as well as printing it. The silent typewriters, the many modern machines which take care of great volumes of work are indeed interesting to see.

The last department added is "Medical Preparedness"

which occupies a very large room with a new force of workers.

Among the many rows of cabinets our attention was called to the files where the record of each medical student is kept from the time he enters medical school until twenty years after his death. If diplomas are lost or stolen and this often happens they can be traced quickly thru this department.

The Public Health Service department was a revelation to us as we were told by Dr. W. W. Bauer that 900 talks and 150 drama programs for Rotary, P.T.A. and other groups were available, for one week, for only the postage which averages ten cents.

The Radio poster had its birth in this department and I hope each Auxiliary will post your county with these attractive sheets. Dr. Bauer suggests they be placed on bulletin boards in Y.M.C.A.'s, Y.W.C.A.'s, libraries, schools, in drug stores and in offices where utility bills are paid. If you are in Chicago this department will give you tickets for the broadcast as 300 seats are available.

If your local station is not broadcasting the A.M.A. program ascertain the reason. Perhaps you can arrange for it to be transcribed and used at another hour but this change should be announced in your local paper.

This department of the A.M.A. sends out speakers and we are hoping to have one in Kansas before this year ends.


We met Mr. Cargill and shall tell you more about Hygeia in our board report. In 1924-25 the Auxiliary secured twenty-eight subscriptions to Hygeia but in 1939-40 there were 9,647 to our credit.

REPORT OF THE NATIONAL BOARD MEETING

In a real blizzard the 29th of November it was my privilege to attend the National Auxiliary Board meeting held at the Palmer House in Chicago, where an alert body of thirty-five women from the four corners of the United States were brought together to further the work of our Auxiliary.

Interesting plans for the National Auxiliary meeting to be held in Cleveland, June 1 to 6, were announced.

Each Auxiliary member in the United States will receive questionnaires from the Public Health Department of the A.M.A. concerning "Women's Health Interests."




PRESCRIBE OR DISPENSE ZEMMER
 Pharmaceuticals, Tablets, Lozenges, Ampules, Capsules, Ointments, etc.
 Guaranteed reliable potency. Our products are laboratory controlled.
THE ZEMMER COMPANY
Write for General Price List
 Chemists to the Medical Profession Oakland Station Pittsburgh, Penn.
 KA 12-40

Phone
3-3261

The OVERTON ELECTRIC CO., Inc.

522
Jackson

Specializing in all forms of
FLUORESCENT LIGHTING.



Buy the finest
HY - GRADE
LAMPS—Look
for the Red
Triangle.

AN ELECTRICAL SERVICE
THAT IS COMPLETE.

TOPEKA

S. D. THACHER, President

KANSAS

Gifts by Luzier



FINE COSMETICS AND PERFUMES MAKE IDEAL GIFTS

Gifts by Luzier include a complete line of Fine Cosmetics and Perfumes, many special Gift Packages, a wide selection of Travel Cases and Week-End Kits, and a nice selection of Toiletries for Men. A leaflet on request.

LUZIER'S FINE COSMETICS AND PERFUMES ARE DISTRIBUTED IN KANSAS BY:

C. B. BURBRIDGE, *Divisional Distributor*
P. O. Box No. 1010
Lincoln, Nebraska

DISTRICT DISTRIBUTORS

EDWIN S. KIMMEL
P. O. Box No. 582
Salina, Kansas

ELSIE HARING
10 East Tenth Street
Hutchinson, Kansas

SUB-DISTRIBUTORS

LAURA CUDDY
615 Fremont Street
Manhattan, Kansas

MYRA KIMMEL
P. O. Box No. 582
Salina, Kansas

MARY I. GREENE
301 West Fifth Street
Junction City, Kansas

LORRAINE BILLINGTON
Lorraine's Beauty Shop
Dodge City, Kansas

This is to be the work of our Public Relations Committees and they hope helpful in discerning the interests and needs of the public so far as the A.M.A. Broadcast and other information along this line is concerned.

Mr. Cargill, Circulation Manager of Hygeia, told us the circulation for Hygeia in 1939-40 was 110,000. This is the first year it has paid its own way and when the circulation is increased to a certain point the Board of Trustees expects to reduce the price—perhaps to half the present rate. It was suggested that we stress the eight months subscription for one dollar.

Doctors now subscribe for 18,000 copies of Hygeia yearly, and it is estimated that two million people read these copies in doctor's offices. Mr. Cargill says if the doctor's copy is stolen he'll gladly replace it with a sample copy.

Four members of the National Advisory Committee and Dr. Van Etten, National A.M.A. President, were guests at the board luncheon and gave much good advice and praised the Auxiliary for its accomplishments and remarkable growth. We were urged to remember our possibilities and responsibilities.

We were told we must be guided in our legislative work only by our advisory committees of our state and county.

Dr. Van Erten urges careful medical examination for every school child and added that "Young America needs to be disciplined." About one-third of the boys called for this draft are being rejected so there is much to be desired in public health work.

West Virginia and Utah have sent in subscription for their quota to the Bulletin, and Kansas, to November 24, had sent in sixteen of our quota of eighty-eight subscriptions. If you send your order at once to Mrs. H. L. Scales of Hutchinson you'll get all four issues.

THE STATE BOARD MEETING

The State Board of the Auxiliary met in Parsons, December 3, at the home of Mrs. Blasdel with nineteen members present.

Plans for the State Convention to be held in Topeka in May were discussed.

Mrs. Bruce Meeker of Sedgwick County was elected Councilor of the Sixth District to take the place of Mrs. E. E. Tippen who resigned.

The excellent reports of work accomplished in the various counties, by councilors and standing committee chairmen was very heartening. Our only regret is that every county was not represented and that every member of the board was not present because we needed you and you would have been inspired, as we were, to carry on your work in a bigger way. Some were delayed unavoidably at the last minute and we were so disappointed.

Please read Mrs. West's report of the meeting in the Newsletter.

EXHIBITS

For a list of "Medical Exhibits for Fairs and Expositions" see the A.M.A. Journal, October 19, 1940.

STAMPS

It was decided at our State Board Meeting that it would be best for each auxiliary to collect stamps if they wish and sell them for their own philanthropies. There are two firms in Kansas City which pay ten cents per pound \$10.00 per hundred pounds for a mixture of all values. They are not interested in just one-cent, two-cent, and three-cent stamps unless there is a good proportion of other stamps, parcel post and otherwise. Perhaps these can be sold in your own locality. If a notice is inserted in your local papers it is surprising how many people bring you stamps.

SILVER PICRATE

Wyeth

is indicated in the treatment of

Silver Picrate is a definite crystalline compound of silver and picric acid. Available in the form of crystals and soluble trituration for the preparation of solutions; suppositories; water-soluble jelly; and powder for insufflation.

- ★ Acute Anterior Urethritis
(due to *Neisseria gonorrhoeae*)
- ★ *Trichomonas Vaginalis*
Vaginitis
- ★ Vaginal Moniliasis
- ★ Bartholinitis and Skeneitis
(due to *Trichomonas Vaginalis*)

Complete information mailed on request

★ JOHN WYETH & BROTHER, INCORPORATED ★
PHILADELPHIA, PA.

CHRISTMAS SEALS



*Help to Protect Your
Home from Tuberculosis*

Cook County Graduate School of Medicine

(In affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit

ANNOUNCES CONTINUOUS COURSES

SURGERY—Two Weeks Intensive Course in Surgical Technique with practice on living tissue, starting every two weeks. General Courses One, Two, Three and Six Months; Clinical Courses; Special Courses. Rectal Surgery every week.

MEDICINE—One Month Course in Electrocardiography and Heart Disease every month, except August and December.

FRACTURES AND TRAUMATIC SURGERY—Informal Course every week. Special Courses may be arranged.

GYNECOLOGY—Clinical Diagnostic and Didactic Course every week.

OBSTETRICS—Informal Course every week.

OTOLARYNGOLOGY—Informal and Personal Courses every week.

OPHTHALMOLOGY—Informal Course every week.

ROENTGENOLOGY—Courses in X-Ray Interpretation, Fluoroscopy, Deep X-Ray Therapy every week.

**GENERAL, INTENSIVE AND SPECIAL COURSES IN
ALL BRANCHES OF MEDICINE, SURGERY
AND THE SPECIALTIES**

TEACHING FACULTY—ATTENDING STAFF OF
COOK COUNTY HOSPITAL

Registrar, 427 South Honore Street, Chicago, Ill.



OAKWOOD SANITARIUM

The beauty and quietness of the environment of Oakwood Sanitarium cannot be over emphasized. This makes the Institution ideal not only for nervous and mental patients but for convalescents and rest cures as well. Alcoholics and drug addicts are accepted.

Illustrated Booklet and Rates on Request

OAKWOOD SANITARIUM
Tulsa, Oklahoma, Route 6

NED R. SMITH, M.D.
Resident Medical Director

Since the dissection of human cadavers was prohibited at times during the Middle Ages, it was necessary for students to steal corpses in order to study anatomy. The great anatomist, Vesalius, for example, obtained material for his anatomical studies by taking the corpses from the gallows of Louvain.

Felix Platter (1536-1614), professor of medicine, and municipal and hospital physician at Bale, relates in his memoirs how he and his fellow students, armed to the teeth, dug up corpses at night in the cemetery at St. Denis. Wrapping themselves in their night clothes, they crept through a hole in the closed city gate. The cadavers were brought to the rooms of one of the students and dissected there. Because of the dreadful odor they poured vinegar on themselves. When they again approached the cemetery at night the watchman shot at them with cross-bows.—Ciba Symposia.

FOR SALE—Ten bed, fully equipped hospital in town of 1700 population. Write Mrs. Florence Funk, Smith Center, Kansas.

FOR SALE—Medical Library, 165 volumes, Tice, Sajous, Dictionaries, Hand-books, etc. Also some laboratory equipment. Write, C. F. Deaver, Sabetha, Kansas.

FOR SALE—McKesson Gas Oxygen machine for use of oxygen and nitrous oxide and four tanks (empty) also a Burdick, Infra Red light. Write Mrs. H. J. Terrill, 205 E. 13th Street, Ottawa, Kansas.



The
W. E. ISLE CO.
PHONE VICTOR 2350
2ND FLOOR-1121 GRAND
KANSAS CITY, MISSOURI

**Spinal Braces
Goldthwaite
Washburn
Taylor
Scoliosis**

*Capable Orthopaedic
Mechanics*

WANTED—Resident doctor, village and rural practice at Alden in Central Kansas; partially equipped office of late Dr. David T. Muir for rent; good roads; pleasant community; large territory; expenses small; hospitals eight and fourteen miles. Write or call Mrs. D. T. Muir, Alden, Kansas.

FOR SALE—Entire office equipment, including electrotherapy machines, instruments, treatment and instrument tables, fluoroscope, library, drugs, etc. Write or call, Miss Floy Liston, Baldwin, Kansas.

*86c out of each \$1.00 gross income
used for members benefit*

**PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION**



Hospital, Accident, Sickness



INSURANCE

**For ethical practitioners exclusively
(52,000 Policies in Force)**

**LIBERAL HOSPITAL EXPENSE
COVERAGE**

\$5,000.00 ACCIDENTAL DEATH
\$25.00 weekly indemnity, accident and sickness

For
\$10.00
per year

\$10,000.00 ACCIDENTAL DEATH
\$50.00 weekly indemnity, accident and sickness

For
\$33.00
per year

\$15,000.00 ACCIDENTAL DEATH
\$75.00 weekly indemnity, accident and sickness

For
\$66.00
per year

38 years under the same management

\$1,850,000 INVESTED ASSETS

\$9,500,000 PAID FOR CLAIMS

\$200,000 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska

THE TROWBRIDGE TRAINING SCHOOL

Established 1917

A HOME SCHOOL for NERVOUS and BACKWARD CHILDREN

The Best in the West

Beautiful Buildings and Spacious Grounds. Equipment Unexcelled. Experienced Teachers. Personal Supervision given each Pupil. Resident Physician. Enrollment Limited. Endorsed by Physicians and Educators. Pamphlet upon Request.

1850 Bryant Building

E. HAYDEN TROWBRIDGE, M.D.

Kansas City, Mo.

THE ARNOLD DRUG COMPANY

523 KANSAS AVENUE

TOPEKA, KANSAS

We Have Catered to the Medical Profession for 71 Years With Ethical Products

ELI LILLY—ABBOTT AND SHARP AND DOHME

Nothing Finer Made

INDEX TO VOLUME XLI

Streptococcus Meningitis, Prognosis and Treatment of—Frank L. Menchan, M.D., Wichita, Kansas.....	1
Surgery in Painful Feet, The Role of—Earl D. McBride, M.D., Oklahoma City, Oklahoma.....	409
Therapy in Pneumonia—Ralph H. Major, M.D., Kansas City, Kansas.....	502
Tuberculosis Case-Findings in University of Kansas Students—Ralph I. Canuteson, M.D., Lawrence, Kansas.....	417
Tuberculosis Case-Findings, X-Ray Interpretation in—Galen M. Tice, M.D., Kansas City, Kansas.....	420
Tularemia Complicated by Septicemia and Heart Disease—David Stump, M.D., and Francis Quinn, M.D., Kansas City, Kansas.....	426
Tumors of the Salivary Glands—Cecil D. Snyder, M.D., Winfield, Kansas.....	389
Ureter, Acute Obstruction of the—Orville R. Clark, M.D., Topeka, Kansas.....	282
Visual Disturbance Complicating Epidemic Parotitis, Report of Two Cases—Lyle S. Powell, M.D., and R. L. Dunlap, M.D., Lawrence, Kansas.....	432
Vitamine K—Letteer Lewis, M.D., McPherson, Kansas.....	243
Xanthoma Tuberosum, Report of a Case—Mahlon Delp, M.D., Kansas City, Kansas.....	95

EDITORIALS

Acute Empyema Thoracis.....	103
A. M. A. Session.....	204
American Medical Women's Association.....	472
American Red Cross, The.....	471
Annual Session, 81st.....	165
Books.....	388
Dr. Cabot Rides Again.....	430
Celebrating the Fourth.....	254
Crymotherapy.....	254
Emigré Physician, The.....	253
E Pluribus.....	471
Fall Clinics.....	387
Fiftieth Anniversary.....	471
Fine Meeting, A.....	203
Hospital Plan.....	63
Indigent Contract.....	345
Indigent Medical Care in Riley County, Summary of Study of.....	473
Insulin Shock and Cerebral Damage.....	342
Is It a Game.....	429
Meat Inspection.....	103
Medical Care Survey.....	67
Medicine Show—At Government Expense.....	429
Mobilizing the Medical Profession.....	293
Osteopathy.....	515
Pathologists.....	19
Periodic Health Examinations.....	63
President's Hospital Program Recognizes the A. M. A. Platform..	19
President, The New.....	165
President-Elect, The New.....	203
President, The Retiring.....	163
Report of Commission on Graduate Medical Education.....	341
Secretary, The Doctors.....	166
Solution of Posterior Pituitary.....	293
Spontaneous Pneumothorax.....	341
Sulfathiazole a New Therapeutic Agent.....	517
Women's Field Army in Kansas, The.....	295

DEATH NOTICES

Bartel, Ferdinand G., Newton.....	84
Basham, David, Walker, Wichita.....	84
Beasley, John Newton, Topeka.....	488
Brown, Charles E., Lansing.....	354
Brown, John Clark, Wichita.....	354
Crume, Ralph O., Fort Scott.....	30
Eagan, Robert Emmete, Long Beach, California.....	128
Fraker, Ray Dayton, Garnett.....	218
Gaston, Charles E., Blue Rapids.....	128
Gunter, Carl Christian, Palco.....	488
Harrison, Alvin E., Topeka.....	128
Hepler, Clarence R., Parsons.....	530
Johnson, Albert C., Chanute.....	354
King, Lamoile Rush, Junction City.....	530
Lewis, Albert B., Hamilton.....	84
Liston, George McClellan, Baldwin.....	84
McIntock, Minda A., Atchison.....	30
McNaught, Joseph Frank, Girard.....	218
Myer, Grant, Marion.....	30
Mowery, William Eugene, Salina.....	218
Muir, David Thomas, Alden.....	276
Naismith, James, Lawrence.....	84
Nelson, Hugo E., Sharon Springs.....	440
Olsen, Henry Herman, Wichita.....	30
Ressler, Charles E., Anthony.....	394
Russell, Roy Dean, Dodge City.....	218
Ryan, James W., Dallas, Texas.....	314
Smith, Benjamin P., Neodesha.....	530
Snyder, Howard L., Winfield.....	396
Spessard, Michael R., Beloit.....	530
Walker, Joseph G., Wichita.....	276
Wynne, Francis E., Baxter Springs.....	354

SPECIAL ARTICLES

Advertising.....	392
Advisory Committee.....	76
A. M. A. Broadcast.....	437
A. M. A. Meeting.....	120, 308
Annual Meeting.....	24, 74
Appointments.....	78, 118, 216, 306, 350, 523
Blind Program.....	80, 350, 440
British Aid.....	437
British War Relief.....	484
Bulletins.....	84
Cancer Exhibits.....	350
Cancer Films.....	76
Cancer Information.....	308
Cancer Pamphlets.....	482
Cancer Program.....	118
College of Physicians.....	120, 437
Committees.....	24, 268, 300, 392, 478, 522
Conference.....	76
Conference of Secretaries Postponed.....	392
Council Meetings.....	24, 78, 392
Cults.....	438
Dues.....	272, 522
Editorials.....	214, 215
Election.....	352, 478
Exhibits.....	27
Exhibit Awards.....	214
Farm Security.....	24
Federal Income Tax.....	34
F. S. A. Medical Aid.....	122
Gafney Case.....	349, 436
Health.....	272
Health Officer.....	78
Health Unit.....	25
Heart Course.....	482
Hospital Meeting.....	437
Incubators.....	120
Indigent Care.....	216, 261-268

INDEX TO VOLUME XLI

Indigent Contract	345
Indigent Medical Care in Riley County, Summary of Study of.....	473
Injunction	523
Kansas Heart Association.....	120
Kansas Medical Assistants.....	396, 442, 532
Kansas State Board of Health Holds Annual Meeting.....	308
Lecture	78
Locations	122, 308
Maternal and Child Welfare.....	36
Medical Assistants	308, 442
Medical Board	523
Medical Care Survey	67
Medical Conference	25, 76
Medical Corps	351
Medical Defense	523
Medical Preparedness	348, 435, 478
Medico-Military Symposium	80
Meeting, 1940	74
Meetings	80, 124, 392, 436, 482, 528
Mid-winter Clinical Program	34
Milk Supervision	526
Minutes	26, 27, 120, 306, 350, 437
Narcotic Permits	214, 272
Narcotics	304
National Physicians Committee	352, 484
New A.M.A. Directory	392
New Licenses	36, 304
News Letter	350
New Superintendent	272
New York Session	308
North Carolina Publishes a Journal.....	272
Osler Picture Available	352
Osteopaths	23, 74, 108, 110, 112, 114, 116, 118
Osteos Lose Narcotics	176
Osteopaths Opinions	268
Physicians Assistants	308
Physicians Committee	25
Physicians Responsibility in Industrial Work	453
Pneumonia Committee	436
Pneumonia Control	122
Pneumonia Program	24, 78
Poliomyelitis	349, 391, 438
Prizes, Golf and Skeet.....	268
Relief Fund	124
Re-registration	392
Resignation	216, 435
Salesmen	78
Scientific Exhibits	392
Shawnee County Meeting.....	25
Socialized Medicine	23
State Laboratory	76
State Meeting Committee.....	391
St. Joseph Clinical Society.....	130
Sulfanilamide	120
Technician's Seminar	482, 528
Transportation	216
Tuberculosis Cures	25
Tuberculosis Director	80
Visitors	482

Western Surgical Association.....	24, 480
Women's Medical Association	482
Workmen's Compensation	122

ANNOUNCEMENTS

30, 84, 130, 222, 276, 356, 396, 442, 488.

KANSAS MEDICAL AUXILIARY

42, 86, 130, 159, 222, 316, 360, 406, 448, 492, 534.

BOOKS

32, 36, 38, 40, 218, 220, 222, 314, 316, 358, 360, 398, 400, 402, 404, 406, 442, 444, 446, 448, 492, 530, 532.

CANCER CONTROL

20, 70, 205, 296, 389, 433, 472, 517.

EYE, EAR, NOSE AND THROAT

73, 298, 344, 432.

PRESIDENT'S PAGE

18, 62, 102, 162, 202, 252, 292, 340, 386, 428, 470, 514.

TUBERCULOSIS ABSTRACTS

22, 73, 107, 254, 342, 390, 434, 475, 520.

MEDICAL ECONOMICS

67, 104, 345, 473, 518.

COUNTY MEDICAL SOCIETIES

28, 82, 126, 216, 274, 314, 354, 392, 440, 486, 528.

MEMBERS

27, 80, 126, 218, 272, 312, 354, 394, 439, 486, 530.

OFFICIAL PROCEEDINGS

166, 208-214, 255-261.

MISCELLANEOUS

Annual Session 81st

Alumni Banquet	149
Annual Banquet & Dance	149
Annual Tournament for All Golfers and Shooters.....	161
Eye, Ear, Nose and Throat Section.....	147
Greetings	133
Hotel Accommodations	160
House of Delegates.....	150
Kansas State Hospital Association.....	160
Page Service	160
President's Page	162
Registration	149
Round Table Luncheons	148
Schedule of Events	140-146
Scientific Exhibits	151-152
Secretaries Luncheon	160
Sedgwick County Committees	139
Speakers	134-138
Stag Banquet	149
Technical Exhibits	152-156
Osteopathic Opinion	176
Visiting Women	
Auxiliary Page	159
Events for Women.....	158
A Day for the Secretary.....	157